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NetDVR User Manual

For

IL8000HF-A Series

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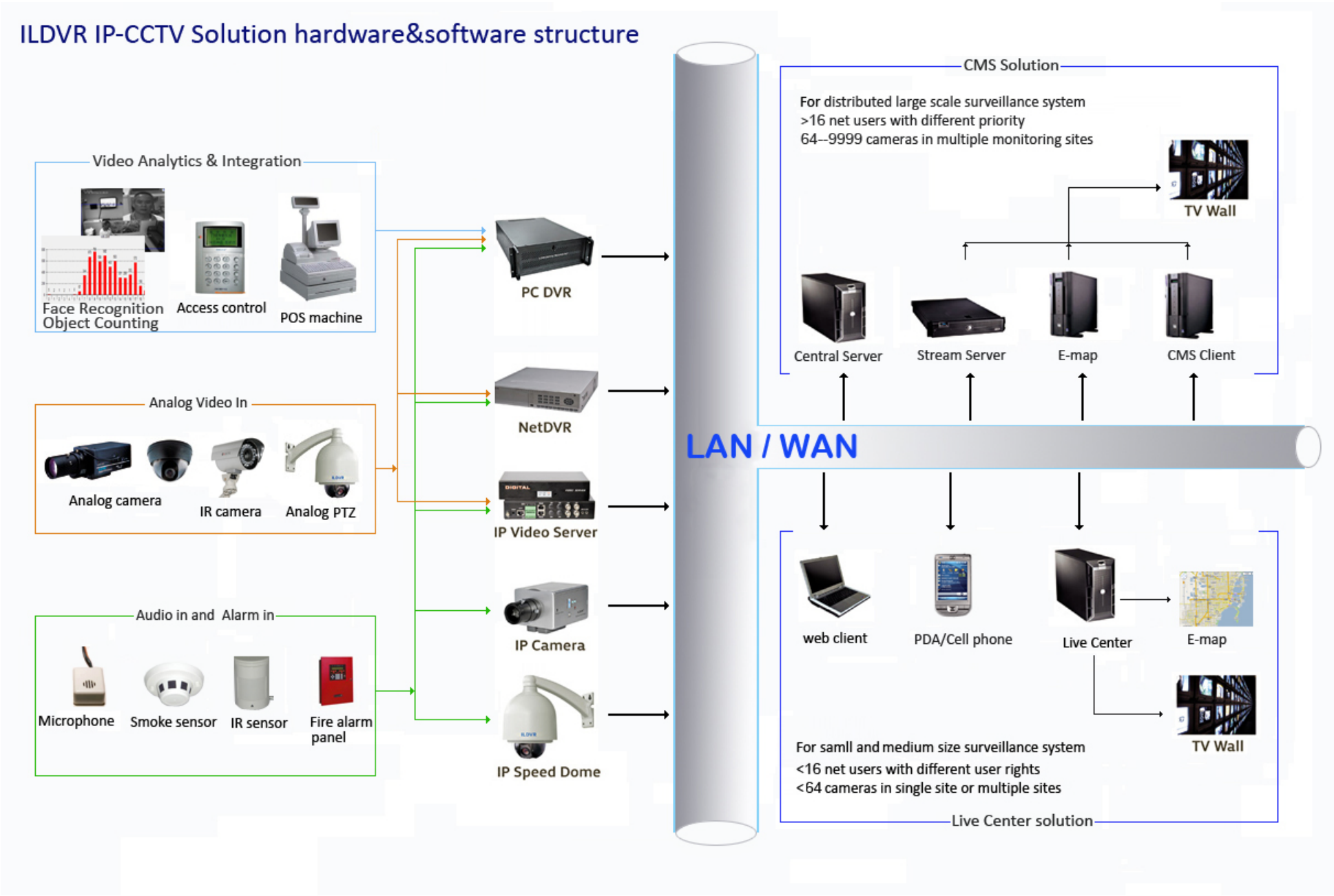
Introduction of IP-CCTV Solutions

Thank you for choosing this product for your security video surveillance system. This operation manual illustrates how to set up hardware and software explains each individual icon function and demonstrates how to use the system effectively in a stable environment. Prior to install/utilize the system, operators should go through this manual thoroughly. Local suppliers may support them in due course.

IP-CCTV Product Lines

Item	Product Name	Video Record Type	Why use it?
1	iHVR (Hybrid DVR)	Local HDD	High resolution, high quality, friendly GUI interface, convenient operation, easy to expand cameras, powerful integration ability.
2	NetDVR (Stand Alone)	Local HDD	Stable, no risk of computer virus, easy maintenance
3	IP Camera	Local SD card and network	Next generation product, all in one combo, easy installation, the best video quality.
4	IP Speed Dome	Network stream	Has all traditional high speed dome features but overcome the coaxial cable distant limit
5	IP Video Server	Network stream (5001HS both SD card and network)	Convert existing analog camera to IP camera, directly upgrade to IP video surveillance system
6	IP Matrix/TV-out (Decode card)	N/A	Utilize existing TV-wall facility


ILDVR IP-CCTV Solution hardware&software structure
Video Analytics & Integration
Face Recognition
Object Counting
Access control
POS machine
Analog Video In
Analog camera
IR camera
Analog PTZ
Audio in and Alarm in
Microphone
Smoke sensor
IR sensor
Fire alarm panel
PC DVR
NetDVR
IP Video Server
IP Camera
IP Speed Dome
LAN / WAN
CMS Solution
For distributed large scale surveillance system
>16 net users with different priority
64--9999 cameras in multiple monitoring sites
TV Wall
Central Server
Stream Server
E-map
CMS Client
web client
PDA/Cell phone
Live Center
E-map
TV Wall
For samll and medium size surveillance system
<16 net users with different user rights
<64 cameras in single site or multiple sites
Live Center solution

1 Product Features and Specifications

1.1 Compression

- H.264 hardware compression. Support up to 16 channels video input (PAL/NTSC). Each channel is independent and real time (PAL: 25 FPS, NTSC: 30FPS). Support both variable bit rate and variable frame rate.
- OggVorbis audio compression standard.
- Independent video encoding parameters, including frame rate, resolution, bit rate, video quality, etc.
- Scheduled and event recording parameters configurable for per individual camera.
- Support dual stream.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Compression, storage and network transmission of video image at 4CIF (D1) resolution.

1.2 Local Function

Record

- Up to 16-ch synchronous playback at 4CIF real time.
- Cycle and non-cycle recording mode.
- Scheduled and event video encoding parameters.
- Multiple recording types, including manual, continuous, alarm, motion, motion | alarm and motion & alarm recording, etc.
- Holiday recording schedule configuration. 8 recording time periods with separate recording types.
- Pre-record and Post-record time for alarm and motion detection, and pre-record time for schedule and manual recording.
- Lock and unlock of video files.
- HDD property can be set to read-only.
- Video data search and playback by channel number, recording type, time etc.
- Digital zoom function in playback mode.
- Pause, play fast, play slow, skip forward, and skip backward when playback, locating in progress bar by dragging the mouse.

HDD Management

- Up to 8 SATA hard disks, 8 network disks (8 NAS disks, or 7 NAS disks+1 IP SAN disk) and 1 eSATA disk can be connected, each disk with a maximum of 4TB storage capacity.
- Support eSATA disk for recording or backup.
- HDD group management.
- Support HDD standby function.
- HDD property: redundancy, read-only, read/write (R/W).
- HDD quota management; different capacity can be assigned to different channel.

Local Monitoring

- HDMI output and VGA output at up to 1920×1080P resolution Simultaneous VGA and CVBS output.
- Simultaneous HDMI, VGA and CVBS outputs; simultaneous live view and playback via VGA and HDMI outputs
- 1/4/9/16-camera video live view, with the camera order adjustable.
- Group switch, manual switch and automatic cycle modes selectable for video live view, with the auto cycle period configurable.
- Digital zoom in live view mode.
- Shield of assigned channel for live view.
- Privacy masking capability.
- Multiple PTZ protocols supported, and settings and call up of presets, patrols and patterns.
- Video image zoom-in by clicking the mouse and tracing by dragging mouse in PTZ control mode.

Alarm & Exception

- Configurable arming time for alarm in/out.
- Various alarm types supported: alarms for video loss, motion detection, video tempering, video in/out format unmatched, illegal access, network disconnection, IP conflict, hard disk error and hard disk full.
- Various alarm response actions supported: camera recording, relay out, on-screen warning, audible warning and upload to center, etc.
- Auto recovery from exceptions.

Backup

- Record files backed up via USB or SATA device.
- Bunch backup by file or by time.
- Record files edited for backup in playback.
- Management and maintenance for backup devices.

PTZ

- Support many kinds of PTZ protocol.
- Support preset, sequence and tour.

Alarms

- Support Email Alarm Notification
- Support exception alarm, motion detection alarm, external alarm, etc.

Others

- Control of DVR via front panel keys, mouse, and IR remote control.
- Three-level user management, each user with individual operating permission for DVR and camera.

- Powerful record and search for log of operation, alarm and exceptions.
- Import/export of device configuration files.

1.3 Network

- 10/100M/1000M adaptive network interface. IPv6 is supported.
- TCP/IP protocol suites, PPPoE, DHCP, DNS, DDNS, NTP, SADP protocols, etc.
- Unicast and multicast supported; TCP and UDP protocols applicable in unicast transmission.
- Remote search, playback and download, lock/unlock of video files.
- Support breakpoint resume.
- Remote access and configuration of parameters; remote import/export of device configuration parameters.
- Remote access of device running status, system log and alarm status.
- Remote control of DVR via button operation.
- Remote lock/unlock of panel buttons and mouse.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS-232 and RS -485 transparent channel transmission.
- Event alarm and exceptions upload to remote management host.
- Remote manual recording.
- Remote video image capture in JPEG format.
- Remote PTZ control.
- Voice talk and broadcast.
- Built-in Web Server.

1.4 Specification

Model		**IL8004HF-A**	**IL8008HF-A**	**IL8016HF-A**
Video/Audio input	**Video compression**	H.264		
	Analog video input	4-ch	8-ch	16-ch
	Video interface	BNC connector (1.0 Vp-p, 75 Ω); PAL / NTSC adaptive		
	Audio compression	OggVorbis		
	Audio input	4-ch,RCA connector (2.0 Vp-p, 1 KΩ)	8-ch,RCA connector (2.0 Vp-p, 1	16-ch,RCA connector (2.0 Vp-p, 1 KΩ)
	Voice talk input	1-ch, BNC (2.0 Vp-p, 1 KΩ)		
	HDMI output	1-ch, resolution: 1920×1080P /60 Hz,1920×1080P /50 Hz, 1600×1200 /60 Hz, 1280×1024 /60 Hz, 1280×720 /60 Hz,1024×768 /60 Hz,		
	VGA output	1-ch, resolution: 1280 × 1024 / 60 Hz, 1024 × 768 / 60 Hz		
	CVBS output	1-ch, BNC connector (1.0 Vp-p, 75 Ω); Resolution: PAL: 704 × 576, NTSC: 704 × 480		
	Video spot output	1-ch, BNC (1.0 Vp-p, 75 Ω), resolution: PAL: 704×576, NTSC: 704×480		

	Audio output	2-ch, BNC(Linear, 600Ω)		
Video/Audio output	**Recording Resolution**	4CIF/2CIF/CIF		
	Frame rate	Main stream: 4CIF / 2CIF@12 fps, CIF@25fps (P)/30 fps(N) Sub stream: CIF / QCIF@ up to 25 fps (P) / 30 fps (N)	Main stream: 4CIF / 2CIF@8 fps, CIF@25 fps (P) /30fps (N) Sub stream: CIF / QCIF@ up to 25 fps (P) / 30 fps (N)	Main stream: 4CIF / 2CIF@6 fps, CIF@25 fps (P) / 30fps (N) Sub stream: CIF / QCIF@ up to 25 fps (P) / 30 fps (N)
	Video bit rate	32 kbps ~ 2048 kbps, or user-defined (Max. 8192 kbps)		
	Stream type	Video/ Video & Audio		
	Audio bit rate	16 kbps		
	Dual stream	Support		
	Synchronous playback	4-ch	8-ch	16-ch
Hard disk	**Type**	8 SATA interface	8 SATA interface	8 SATA interfaces
	Capacity	Up to 4TB capacity for each interface		
External interface	**Network interface**	1, RJ45 10 M / 100 M /1000M adaptive Ethernet interface		
	Serial interface	1 RS-232 interface, 1 RS-485 interface for PTZ, 1RS-485 interface for keyboard		
	USB interface	2, USB 2.0		
	Alarm in	4	16	16
	Alarm out	2	4	4
Others	**Power supply**	100~240 VAC, 6.3A, 50~60Hz		
	Consumption	≤35 W (without hard disk or DVD-R/W)	≤40 W (without hard disk or DVD-R/W)	≤45 W (without hard disk or DVD-R/W)
	Working temperature	-10 ºC ~ +55 ºC		
	Working humidity	10% ~ 90%		
	Chassis	19-inch rack-mounted 2U chassis		
	Dimensions (W × D × H)	440 × 460 × 95 mm		
	Weight	≤8 kg (without hard disk or DVD-R/W)		

2 Installation

In order to run NetDVR stably, please install the NetDVR in well ventilation space with allowed range of temperature and humidity as claimed in specifications.

2.1 Rear Panel Description

IL8016HF-A Rear Panel (Please refer to real product for different model)

No.	Item	Description
1	**VIDEO IN**	BNC connector for analog video input.
2	**AUDIO IN**	BNC connector for audio input.
3	**VIDEO SPOT OUT**	BNC connector for video output.
4	**VIDEO OUT**	BNC connector for video output. 1. When both HDMI and VGA are connected, it is used for live view only; 2. When either HDMI or VGA is connected, it is used as the spot video output for live view, playback, recording and PTZ controls; 3. When neither HDMI nor VGA is connected, it is used as the main video Output for live view and menu operations.
5	**AUDIO OUT**	BNC connector for audio output. This connector is synchronized with VIDEO OUT.

6	**LINE IN**	BNC connector for audio input.
7	**RS-232 Interface**	Connector for RS-232 devices.
8	**VGA**	DB9 connector for VGA output. Display local video output and menu.
9	**HDMI**	HDMI video output connector.
10	**eSATA (Optional)**	Connects external SATA HDD, CD/DVD-RM.
11	**LAN Interface**	Connector for LAN (Local Area Network).
12	**Termination Switch**	RS-485 termination switch. Up position is not terminated. Down is terminated with 120Ω resistance.
13	**RS-485 Interface**	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively.
	Controller Port	D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, the first DVR's D+, D- pin should be connected with the D+, D- pin of the next DVR.
	ALARM IN	Connector for alarm input.
	ALARM OUT	Connector for alarm output.
14	**GROUND**	Ground (needs to be connected when DVR starts up).
15	**AC 100V ~ 240V**	AC 100V ~ 240V power supply.
16	**POWER**	Switch for turning on/off the device.

2.2 External Alarm In/Out Connection

The alarm input is a Normal Open/Closed relay. If the input is not a Normal Open/Closed relay, follow the connection diagram below:

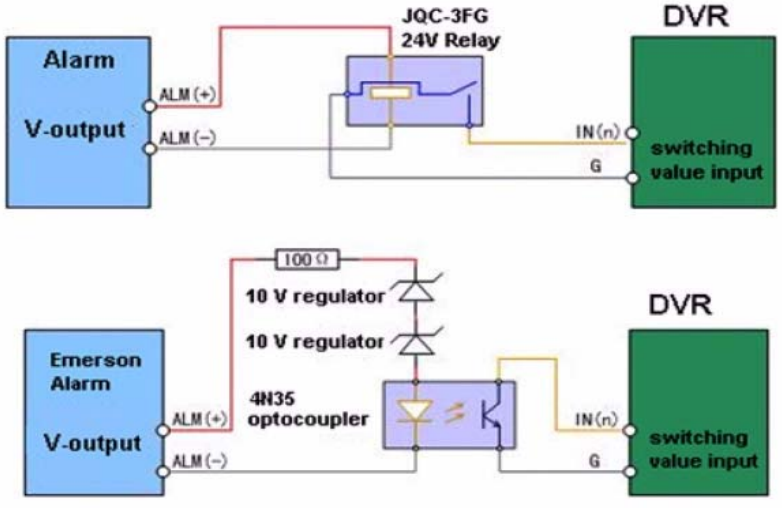


Figure 2.2.1

To connect to an AC/DC load, use the following diagram:

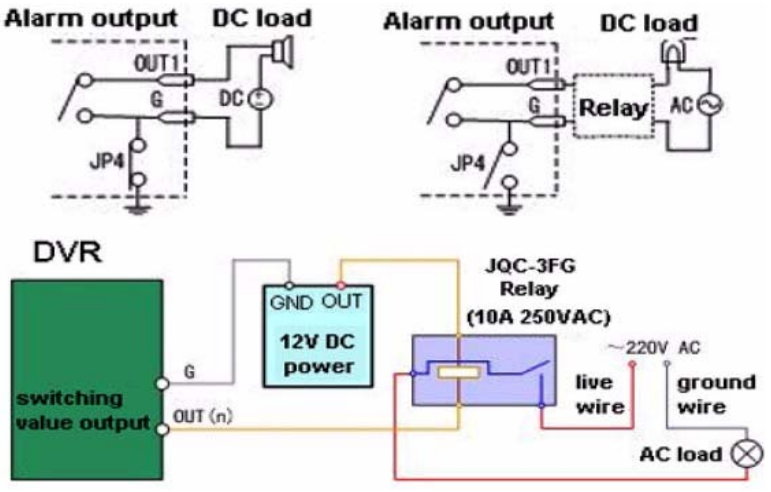


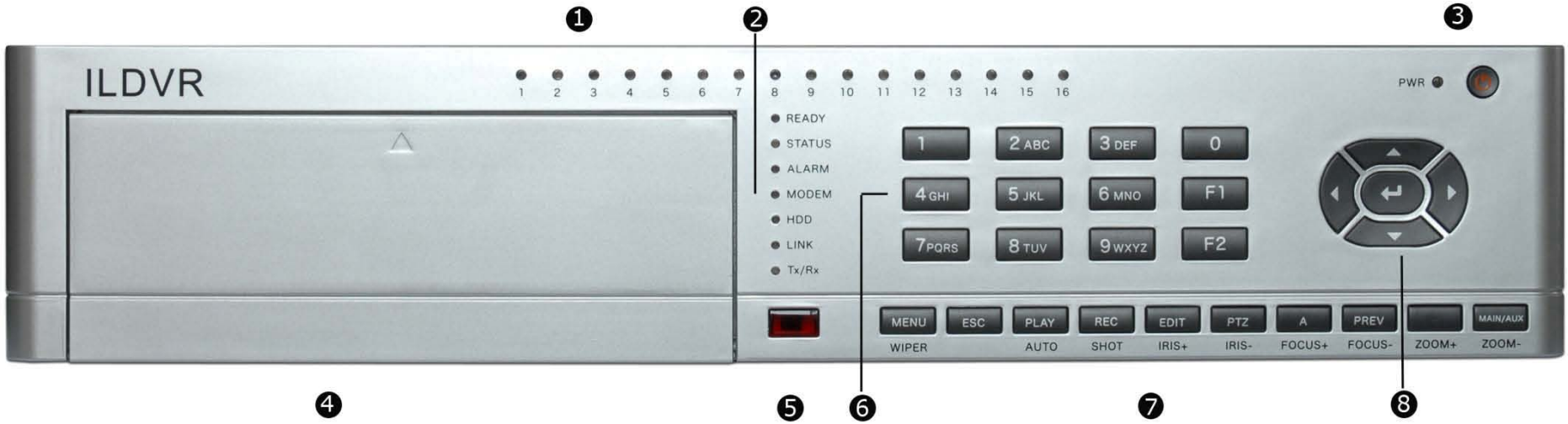
Figure 2.2.2

For DC load, JP4 can be used within the limit of 12V/1A safely. If the interface is connected to an AC load, JP4 should be left open. Use an external relay for safety (as shown in the figure above).
There are 4 jumpers (JP4, JP5, JP6, and JP7) on the motherboard, each corresponding with one alarm output. By default, jumpers are connected. To connect an AC load, jumpers should be removed.
For your attention: An external relay is needed to prevent electric shock when connecting to an AC load.

3 Front Panel and Remote Controller Introduction

3.1 NetDVR Front Panel

For your attention:
It is important to note that you must click the EDIT button on either the remote or front panel on a text field before you are able to edit its content. After you're done entering text, you must hit the ENTER button to be able to move on to the next field.



Index	Type	Name	Description
1	Camera Status Lamps	1-16	Show channels 1-16 status. Green means recording; Red means network transmission; Orange means recording and network transmission. Lamp flicker and red means the corresponding HDD has error.
2	System Status Lamps	READY	NetDVR is ready.
		STATUS	Green means you can use IR remote control.
		ALARM	Red means there is alarm.
		MODEM	Green means modem connection and dial-up successful.
		HDD	Twinkle in red means reading or writing HDD.
		LINK	Green means network is OK.
		Tx/Rx	Twinkle in green means data is being transmitted.
3	Power Lamp	PWR	Device switch with power indicator lamp. Green means NetDVR is working; Red means NetDVR is powered off. No light means no power is supplied.
	Power On/Off Button		**Turn on and /or shut down NetDVR**
4	CDRW Cover		**Push to open CDRW**
5	IR Receiver		**When using the remote controller keep it face to IR Receiver**

6	Input Keys	Numeric Keys	Input number, lower case and upper case character and symbols
		F1	Function key = [LIGHT] in PTZ control.
		F2	Function key = [AUX] in PTZ control.
7	Compound Keys	MENU	1. Switch preview mode into menu 2. Brush control short key [WIPER] 3. Press [MENU] for more than 5 seconds to cancel button beep sound
		ESC	Cancel and back to parent menu
		PLAY	1. Local playback 2. [AUTO] in PTZ mode
		REC	1. Manual record; 2. [SHOT] in PTZ mode (adjust preset)
		EDIT	1. In edit state, delete current cursor character 2. [IRIS+] in PTZ control 3. Select □ to enable or "X" to disable
		PTZ	1. Enter into PTZ control mode 2. [IRIS-] in PTZ control
		A	1. Input switch (number, lower case, upper case and symbol) 2. [FOCUS+] in PTZ control 3. In preview mode, display or hide the channel status bar
		PREV	1. Multi screen preview switch 2. Switch menu mode into preview 3. [FOCUS-] in PTZ control
		(Blank)	[ZOOM+] in PTZ control
		MAIN/AUX	1. Auxiliary video out and audio out 2. [ZOOM-] in PTZ control
		Shift	Switch key function between control and input, only apply to IL6004HN
8	Control Keys	Direction Keys	Composed of [□] , [□] , [□] and [□] 1. Menu mode, use [□] / [□] to select [□] / [□] to edit 2. PTZ direction control 3. Playback speed control
		ENTER	1. Menu confirmation 2. Select □ to enable or "X" to disable 3. Pause playback

3.2 IR Remote Controller

Index	Name	Description
1	POWER Button	Turn off NetDVR device
2	DEV	Enable/Disable IR remote control
3	Numeric Keys	Same as numeric keys of front panel.
4	EDIT	Same as EDIT key of front panel.
5	A	Same as A key of front panel.
6	REC	Same as REC key of front panel.
7	PLAY	Same as PLAY key of front panel.
8	INFO	
9	VOIP	
10	MENU	Same as MENU key of front panel.
11	PREV	Same as PREV key of front panel.
12	Direction Keys ENTER	Same as direction keys and enter key of front panel.
13	PTZ	Same PTZ key of front panel.
14	ESC	Same as ESC key of front panel.
15	Reserved	
16	F1	Same as [F1] key of front panel.
17	Lens control	IRIS, FOCUS ZOOM for lens control.
18	F2	Same as [F2] key of front panel.

Troubleshooting Remote Control:

Note: Please make sure you have install batteries properly in the remote control. And you have to aim the remote control at the IR receiver in the front panel. If there is no response after you press any button on the remote, follow the procedure below to troubleshoot.

1. Go into Menu -> Settings -> General -> More Settings by operating the front control panel or the mouse.
2. Check and remember DVR ID#. The default ID# is 255. This ID# is valid for all IR remote controls.
3. Press the DEV button on the remote control.
4. Enter the DVR ID# from step 2.
5. Press the ENTER button on the remote.

If the Status indicator on the front panel turns green, the remote control is operating properly. If the Status indicator does not turn green and there is still no response from the remote, please check the following:

1. Batteries are installed correctly and the polarities of the batteries are not reversed.
2. Batteries are fresh and not out of charge.
3. IR receiver is not obstructed.

If the remote still can't function properly, please change the remote and try again, or contact the device provider.

3.3 Using USB Mouse

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can also be used with this DVR. To use a USB mouse:

1) Plug USB mouse into one of the USB ports on the front panel of the DVR.

2) The mouse should automatically be detected. If in a rare case that the mouse is not detected, please refer to the recommended device list from your provider.

The buttons on the mouse corresponds to:

1) Left Button:

- **Single-Click:** Select a component of a menu, such as a button or an input field. This is similar to pressing the ENTER button on the remote/front panel controls.
- **Double-Click:** Switch between single screen and multi-screen mode in Preview/ Playback mode.
- **Click and Drag:** Clicking and dragging the Left mouse button can be used to control the pan/tilt of a PTZ camera as well as to vary the position of digital zoom area and camera OSD. It can also be used to setup the motion detect alarm areas and mask areas.

2) Right Button:

- **Single-Click:** Shows pop-up menu. Exit current sub-menu to parent-menu.

3) Scroll-Wheel:

- **Scroll Up:** In Preview mode, scrolling up will switch to the previous screen. In Menu mode, it will move the selection to the previous item.
- **Scroll Down:** In Preview mode, scrolling down will switch to the next screen. In Menu mode, it will move the selection to the next item.

3.4 Using Soft Keyboard

When a mouse is used to perform task on the DVR, clicking on a text input field will bring up the Soft Keyboard, shown as following figure. The buttons on the soft keyboard represents:

Icons	Description	Icons	Description
En	English	A	Capital English
123	Numbers		Symbols
	Lowercase/Uppercase		Backspace
	Space	Enter	Enter
ESC	Exit		

4 Basic Operation

4.1 Power on and shut down

For your attention: Proper startup and shutdown procedures are crucial to expanding the life of the DVR.

Before you start, please check that the voltage of the extra power supply is the same with the DVR's requirement, and the ground connection is working properly.

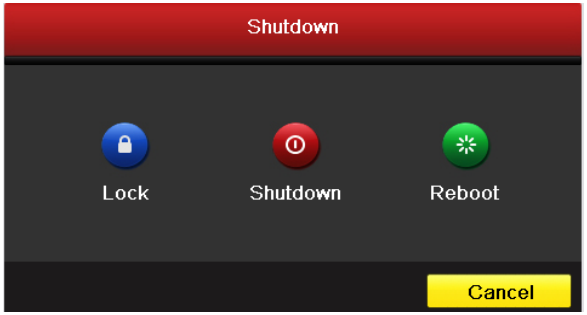
Starting up the DVR:

Steps:

1. Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power indicator LED on the front panel should be red, indicating the device gets the power supply.
2. Press the POWER button on the front panel. The Power indicator LED should turn green indicating that the unit begins to start up.
3. After startup, the Power indicator LED remains green. A splash screen with the status of the DSP and HDD appears on the monitor. The first row of icons at the bottom of the screen shows the DSP status. If an 'X' is shown on the top of an icon, it means that the DSP initialization has failed. The second row of icons at the bottom of the screen will show the HDD status. If an 'X' is shown, it means that the HDD is not installed or cannot be detected.

Shutting down the DVR

There are two proper ways to shut down the DVR. To shut down the DVR:



• OPTION 1: Standard shutdown

1. Enter the Shutdown menu. Menu -> Shutdown
2. Select the **Shutdown** button.
3. Click the **Yes** button.

• OPTION 2: By operating the front panel

1. Press and hold the POWER button on the front panel for 3 seconds.
2. Enter the administrator's username and password in the dialog box for authentication.
3. Click the **Yes** button.

Note: Do not press the POWER button again when the system is shutting down.

Rebooting the DVR

While in the Shutdown menu, you can also reboot the DVR. Steps:

1. Enter the **Shutdown** menu by clicking Menu > Shutdown.
2. Click the **Lock** button to lock the DVR or the **Reboot** button to reboot the DVR.

4.2 User Name and Password

When NetDVR is delivered from factory, there is only one default administrator named "admin" setup.
Its default password is "12345". This administrator name cannot be modified but its password can be modified.

4.3 Running Setup Wizard

Please make sure the DVR has been installed with HDD before access to the Setup Wizard. By default, the Setup Wizard will start once the DVR has loaded, as shown in Figure 4.3.1. The Setup Wizard will guide you through some important settings of your DVR. Select *Next* if the DVR has been installed with HDD, or click *Cancel* to access Live View window if no HDD is installed.
If the checkbox is check-off to ☐, then the Setup Wizard dialog box will not appear next time until the factory default settings are resumed; and if you select the checkbox check-on to ☑, the device will automatically access the Setup Wizard dialog box when it starts up next time.

To start using the Setup Wizard:

1. The Setup Wizard can walk you through some important settings of the DVR. If you don't want to use the Setup Wizard at this time, click the **Cancel** button. You can also choose to use the Setup Wizard next time by leaving the "Start wizard when DVR starts?" checkbox in checked status.
2. Click **Next** button on the Wizard window to enter the **Login** window, as shown in Figure 4.3.2.
3. Enter the admin password. By default, the password is 12345.
4. To change the admin password, check the **New Admin Password** checkbox. Enter the new password and confirm the password in the given fields.
5. Click the **Next** button to enter the date and time settings window, as shown in Figure 4.3.3.
6. After the time settings, click **Next** button which will take you back to the Network Setup Wizard window, as shown in Figure 4.3.4.
7. Click **Next** button after you having configured the network parameters, which will take you to the **HDD Management** window, shown in Figure 4.3.5.
8. To initialize the HDD, click the **Init** button. Initialization will remove all the data saved in the HDD.

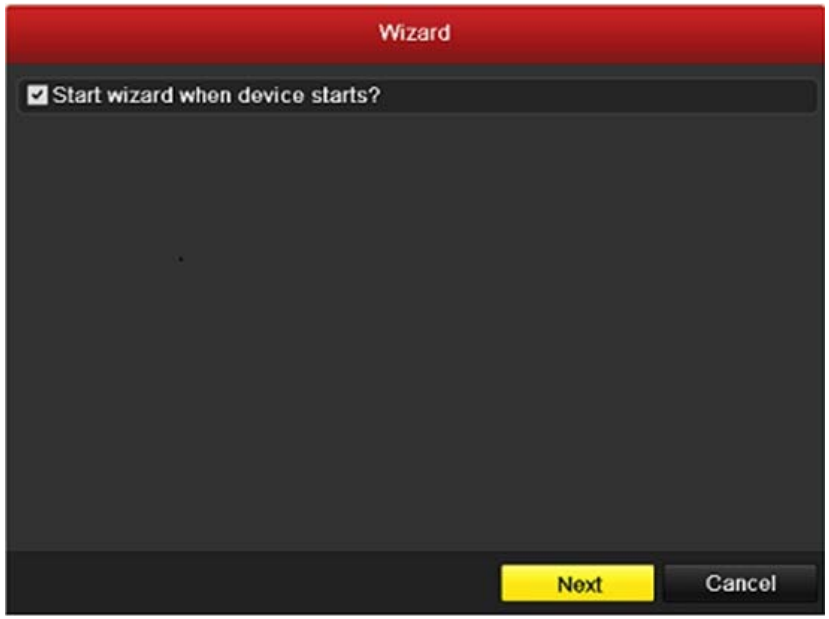


Figure 4.3.1.

Figure 4.3.2

Figure 4.3.3 Date and Time Settings

Figure 4.3.4 Network Configuration

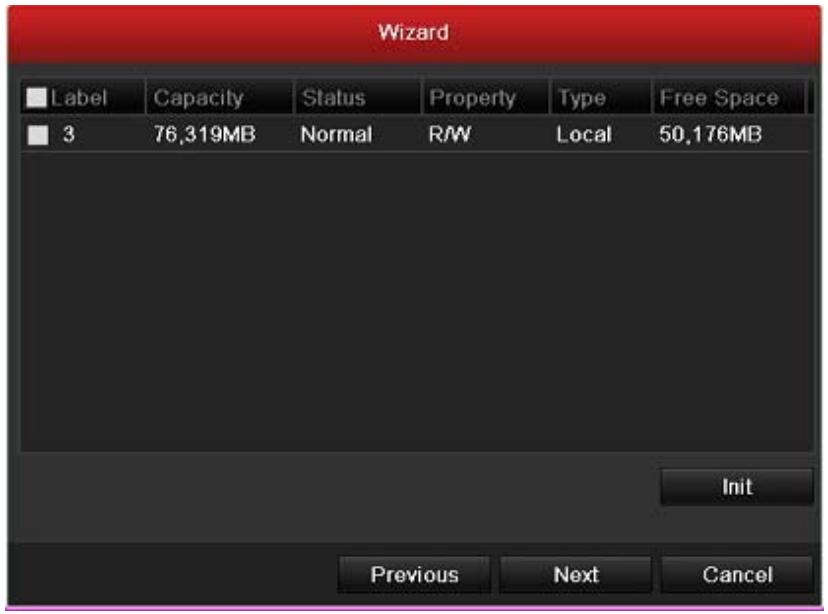


Figure4.3.5 HDD Management

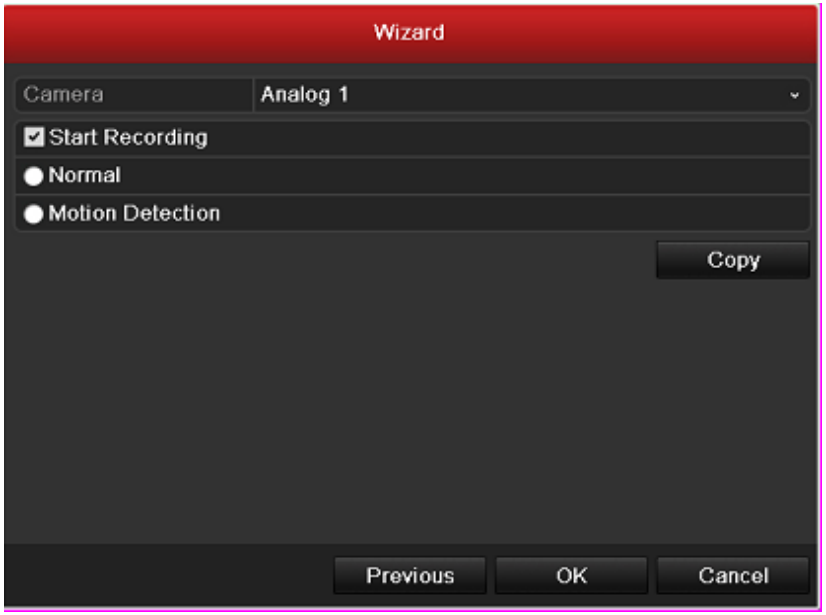


Figure 4.3.6 Record Settings

9. Click **Next** button to enter the **Record Settings** window, as shown in Figure 4.3.6.

10. Click **Copy** to copy the settings to other channels, as showing Figure 4.3.7.

11. Click **OK** to complete the startup Setup Wizard. You've completed the Setup Wizard. The next step in the initial setup process is to setup the system date and time. After completion of Setup Wizard, enter the live preview window.

Figure 2.7 Copy Record Settings

5 Live Video Preview Operation

Live view shows you the video image getting from each camera in real time. The DVR will automatically enter Live View mode when powered on. It is also at the very top of the menu hierarchy, thus hitting the ESC many times (depending on which menu you're on) will bring you to the Live View mode.

Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.

Table 5.1 Description of Live View Icons

Icons	Description
	Alarm (video loss, tampering, motion detection or sensor alarm)
	Record (manual record, schedule record, motion detection or alarm triggered record)
	Alarm & Record

In live view mode, there are many functions provided. The functions are listed below.

- Single Screen: show only one screen on the monitor.
- Multi-screen: show multiple screens on the monitor simultaneously.
- Auto-switch: the screen is auto switched to the next one. And you must set the dwell time for each screen on the configuration menu before enabling the auto-switch. Menu->Configuration->Live View->Dwell Time.
- All-day Playback: play back the recorded videos for current day.
- Aux/Main output switch: the DVR will check the connection of the output interfaces to define the main and auxiliary output interfaces. The priority level for the main and aux output is HDMI->VGA->CVBS.

This means if the HDMI is used the output of it will be the main output. If the HDMI is not used, the VGA output will be the main output. See the table below.

Table 5.2 Priorities of Interfaces

	HDMI	VGA	CVBS	Main output	Auxiliary output
1	√	√	√	HDMI	VGA
2	√	×	√	HDMI	CVBS
3	×	√	√	VGA	CVBS
4	×	×	√	CVBS	

√ means the interface is in use, × means the interface is out of use or the connection is invalid. And the HDMI, VGA and CVBS can be used at the same time. When the aux output is enabled, the main output can't do any operation, and you can do some basic operation on the live view for the Aux output.

5.1 Front Panel Operation

Table 5.3 Front Panel Operation in Live View

Functions	**Front Panel Operation**
Show single screen	Press the corresponding Alphanumeric button. E.g. Press 2 to display only the screen for channel 2.
Show multi-screen	Press the PREV/FOCUS- button.
Manually switch screens	Next screen: left direction button. Previous screen: right direction button
Auto-switch	Press **Enter** button.
All-day playback	Press **Pla**y button.
Switch between main and aux output	Press **Main/Aux** button.

5.2 Using the Mouse in Live View

Table 5.4 Mouse Operation in Live View

Name	Description
Menu	Enter the main menu of the system by right clicking the mouse.
Single Screen	Switch to the single full screen by choosing channel number from the dropdown list.
Multi-screen	Adjust the screen layout by choosing from the dropdown list.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Start/Stop Auto-switch	Enable/disable the auto-switch of the screens.
All-day Playback	Play back the video of the selected channel.
Aux Monitor	Switch to the auxiliary output mode and the operation for the main output is disabled.

Figure 5.1 Right-click Menu

Notes:

- The *dwell time* of the live view configuration must be set before using **Start Auto-switch**.
- If you enter Aux monitor mode and the Aux monitor is not connected, the mouse operation is disabled; witch back to the Main output with the MAIN/AUX button on the front panel or remote.
- If the corresponding camera supports intelligent function, the Reboot Intelligence option will be included when right-clicking mouse on this camera.

5.3 Using an Auxiliary Monitor

In the live view mode of the main output monitor, the menu operation is not available while in Aux output mode. Certain features of the Live View are also available while in an Aux monitor. These features include:

• **Single Screen:** Switch to a full screen display of the selected camera. Camera can be selected from a dropdown list.
• **Multi-screen:** Switch between different displays layout options. Layout options can be selected from a dropdown list.
• **Next Screen:** When displaying less than the maximum number of cameras in Live View, clicking this feature will switch to the next set of displays.
• **Playback:** Enter into Playback mode.
• **PTZ:** Enter PTZ Control mode.
• **Main Monitor:** Enter Main operation mode.

5.4 Quick Setting Toolbar in Live View Mode

On the screen of each channel, there is a quick setting toolbar which shows when you point the mouse to the bottom of the screen.

Figure 5.2 Quick Setting Toolbar

Table 5.5 Description of Quick Setting Toolbar Icons

Icons	Description	Icons	Description	Icons	Description
	Enable Manual Record		Instant Playback	/	Mute/Audio on
	Capture		PTZ Control		Digital Zoom
	Image Settings		Close		

Instant Playback only shows the record in last five minutes. If no record is found, it means there is no record during the last five minutes.

Digital Zoom can zoom in the selected area to the full screen. Left-click and drag the red box for target zooming in area.

Image Settings icon can be selected to enter the Image Settings menu. There are four preset modes for selection according to the real situation. Below is the explanation for each mode.

Indoor: the image is relatively smoother.

Dim Light: the image is smoother than the other two modes.

Outdoor: the image is relatively clearer and sharper. The degree of contrast and saturation is high.

You can also choose the **Customize mode** to set the image parameters like brightness, contrast, saturation and hue.

Click the **Restore** button to restore the previous settings.

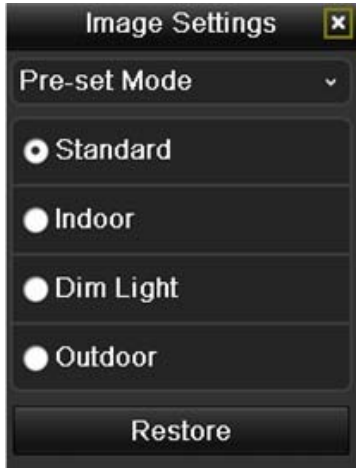


Figure 5.5 Image Settings- Customize

Figure 5.4 Image Settings- Preset

5.5 Adjusting Live View Settings

Live View settings can be customized according to different needs. You can configure the output interface, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc. ***Steps:***

1. Enter the Live View Settings interface. Menu-> Configuration-> Live View. The settings available in this menu include:

- **Video Output Interface:** Designates the output to configure the settings for. Outputs include HDMI (depends on the model), VGA, Main CVBS and Spot Output.
- **Live View Mode:** Designates the display mode to be use for Live View.
- **Dwell Time:** The time in seconds to *dwell* between switching of channels when enabling auto-switch in Live view.
- **Enable Audio Output:** Enables/disables audio output for the selected video output.

• **Event Output:** Designates the output to show event video.
• **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.

2. Setting Camera Order

To set the camera order:
1). Select **View**.
2). Click the up and down button at each screen to select the channel you would like to display. Setting an 'X' means the channel will not be displayed.
3). Click the **Apply** button.

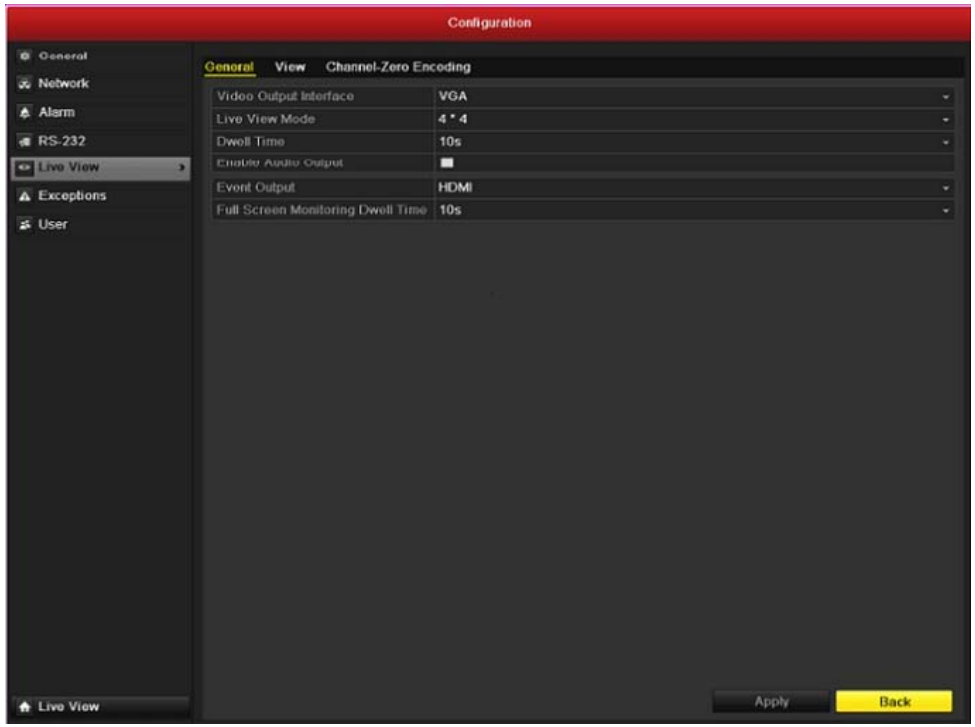


Figure 5.6 Live View-General

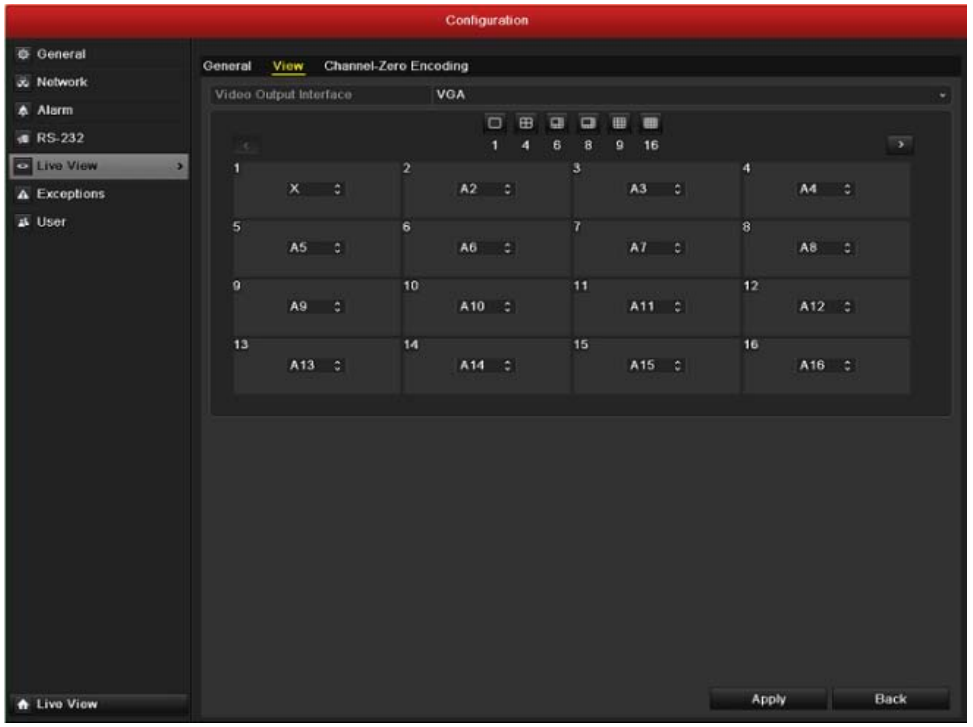


Figure 5.7 Live View- Camera Order

5.6 Channel-zero Encoding

Sometimes you need to get a remote view of many channels in real time from web browser or Live Center software, in order to decrease the bandwidth requirement without

affecting the image quality, channel-zero encoding is supported as an option for you. ***Steps:***

1. Enter the **Live View** Settings interface.
2. Select **Channel-Zero Encoding** tab.
3. Check the checkbox after **Enable Channel-Zero Encoding.**
4. Configure the Frame Rate, Max. Bit rate Mode and Max. Bit rate.

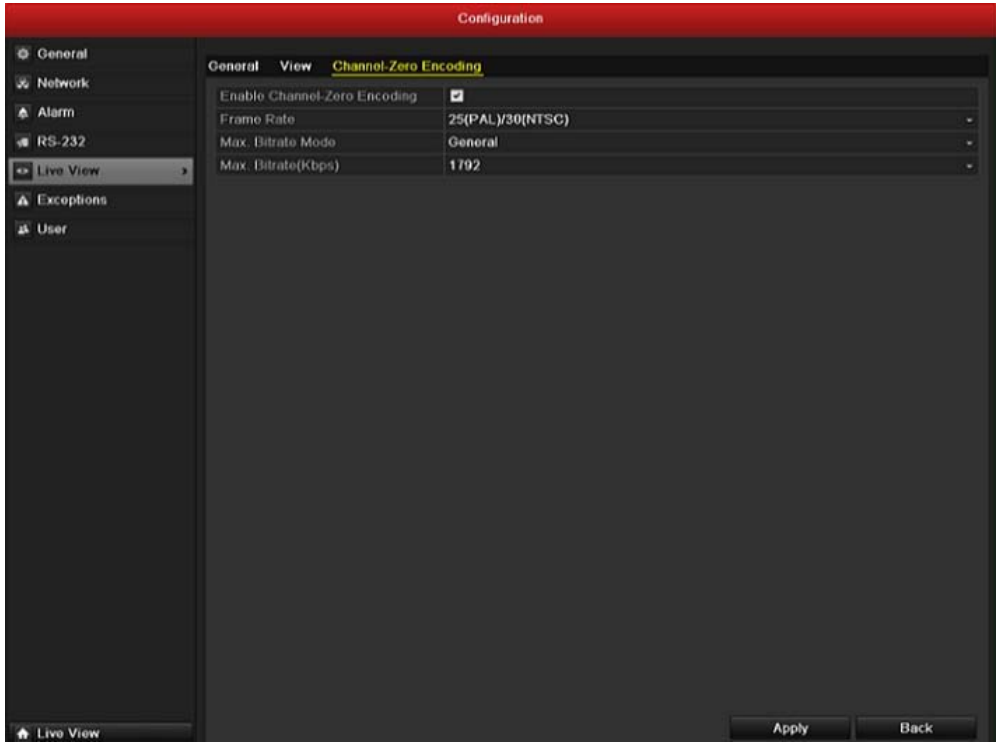


Figure 3.8 Live View- Channel-Zero Encoding

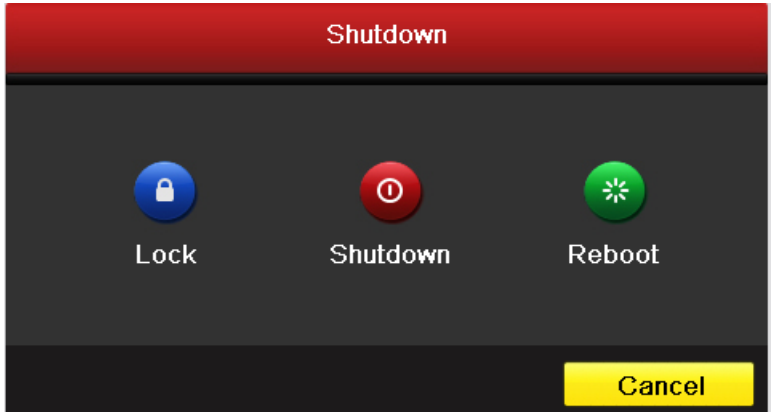


Figure 3.9 Shutdown

5.7 Locking the System

After locking the system, the monitor turns to the live view mode and if you want to do some operation, you need to enter user name and password tog in again. ***Steps:***

1. Enter the Shutdown menu. Menu->Shutdown
2. Click **Lock**.

6 Record Setup

6.1 Configuring Encoding Parameters

Before you start:

1. Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. (Menu>HDD>General)

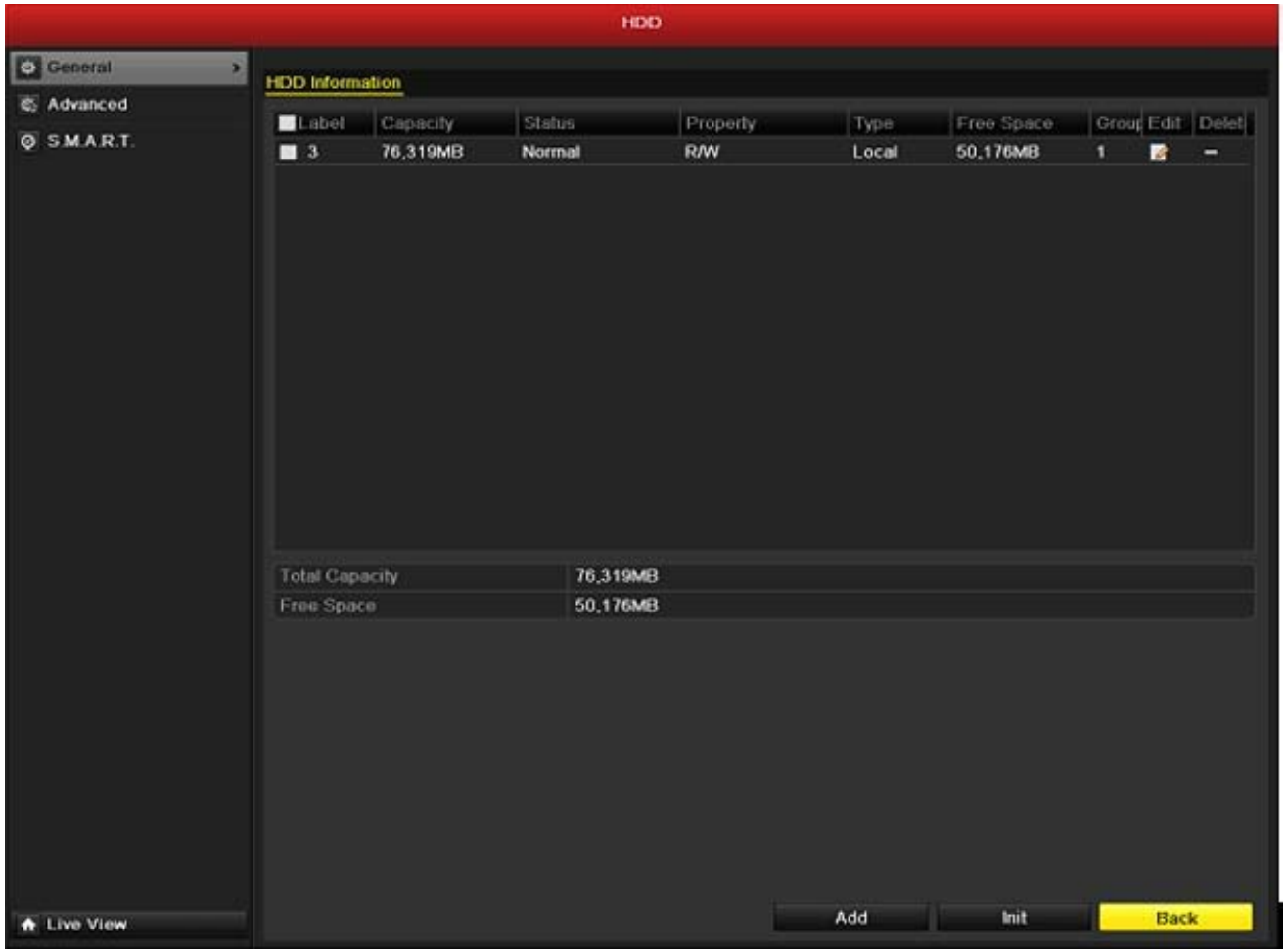


Figure 6.1 HDD- General

2. Click **Advance** to check the storage mode of the HDD.

1) If the HDD mode is *Quota*, please set the maximum record capacity and maximum picture capacity. For detailed information, see *Section 13.5 Configuring Quota Mode*.

2) If the HDD mode is *Group*, you should set the HDD group. For detailed information, see Section 6.9 Configuring HDD Group for Recording and Capture.

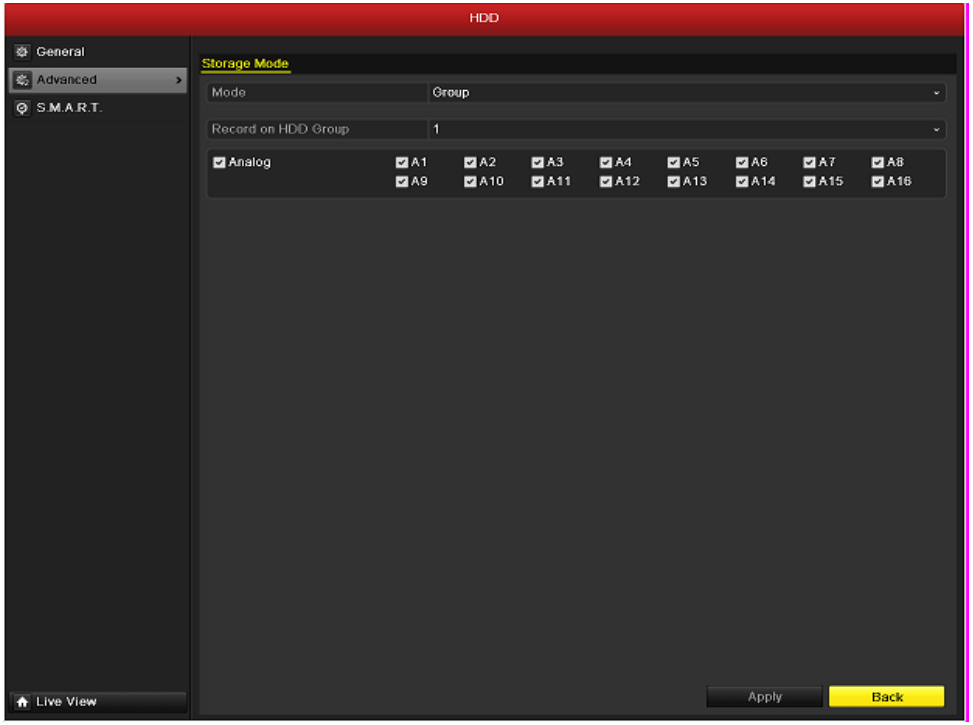


Figure 6.2 HDD- Advanced

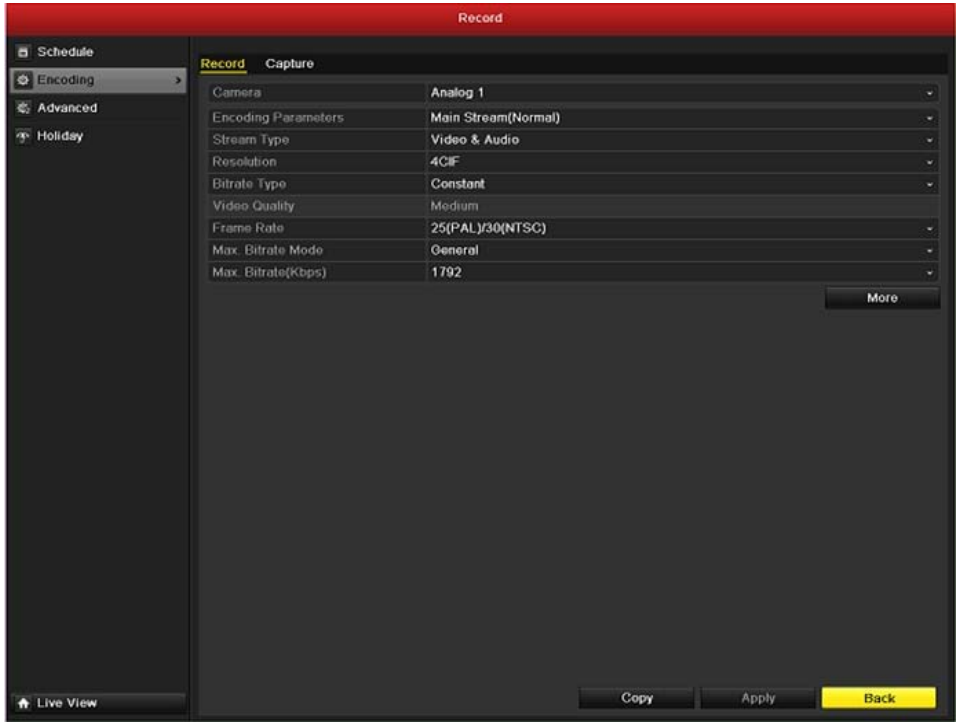


Figure 6.3 Record Encoding

Steps:

1. Enter the Record settings interface to configure the encoding parameters: Menu>Record>Encoding

2. Encoding Parameters for Recording

1) Select **Record** to configure. You can configure the stream type, the resolution, the video quality on demand.

2) Click **More** to configure the pre-record, post-record time, expired time, redundant record/capture and whether you want to record audio.

- Pre-record: The time you set to record before the scheduled time or event. For example, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
- Post-record: The time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
- Expired Time: The expired time is the longest time for a record file to be kept in the HDD, if the deadline is reached, the file will be deleted. You can set the expired time to 0, and then the file will not be deleted. The actual keeping time for the file should be determined by the capacity of the HDD.

- Redundant Record/ Capture: Enabling redundant record or capture means you save the record and captured picture in the redundant HDD. See Section 6.8 Configuring Redundant Record/ Capture.
- Record Audio: Choose “yes” to record the sound, “no” to record the image without sound.

Figure 6.4 Record Encoding- More

Figure 6.5 Copy Camera Settings

3) Click **Apply** to save the settings.
4) Click **OK** to back to the upper level menu.
5) You can copy the settings to other channels by clicking **Copy**, if the setting can also be used for other channels.

Note: The redundant record/capture is to decide whether you want the camera to save the record files or captured pictures in the redundant HDD. You must configure the redundant HDD in HDD settings. For detailed information, see *Section 13.4.2 Setting HDD Property*.

3. Encoding Parameters for Capture

1) Select the **Capture**.
2) Configure the parameters.
3) Click **Apply** to save the settings.
4) If the parameters can also be used to other channels, click **Copy** to copy the settings to other channels.

Note: The interval is the time period between two capturing actions. You can configure all the parameters on this menu on your demand.

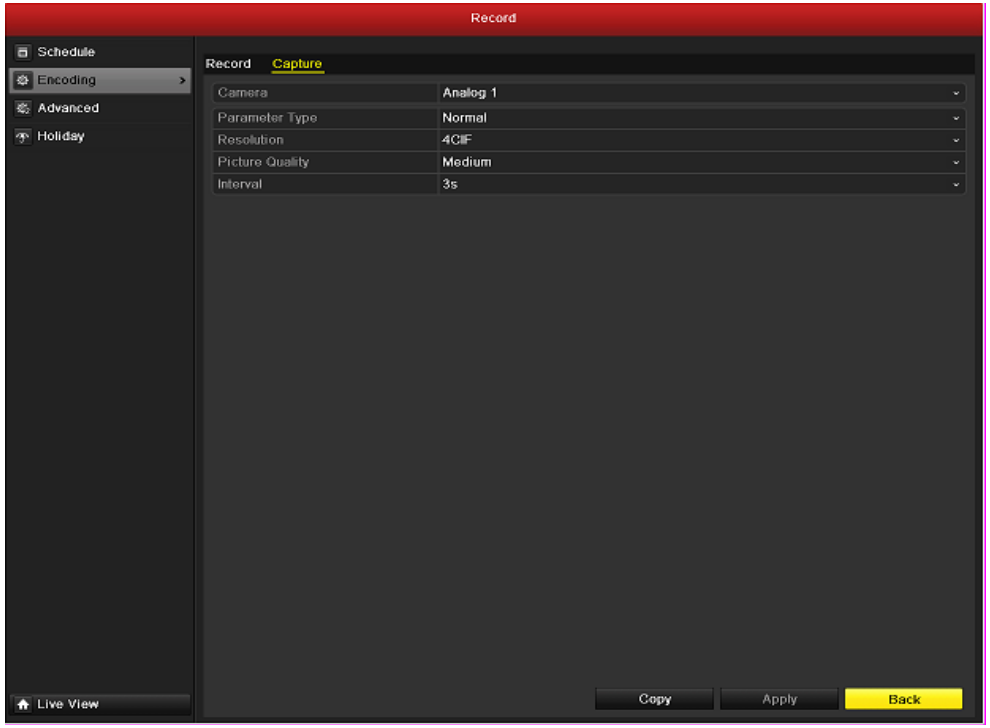


Figure 6.6 Capture Encoding

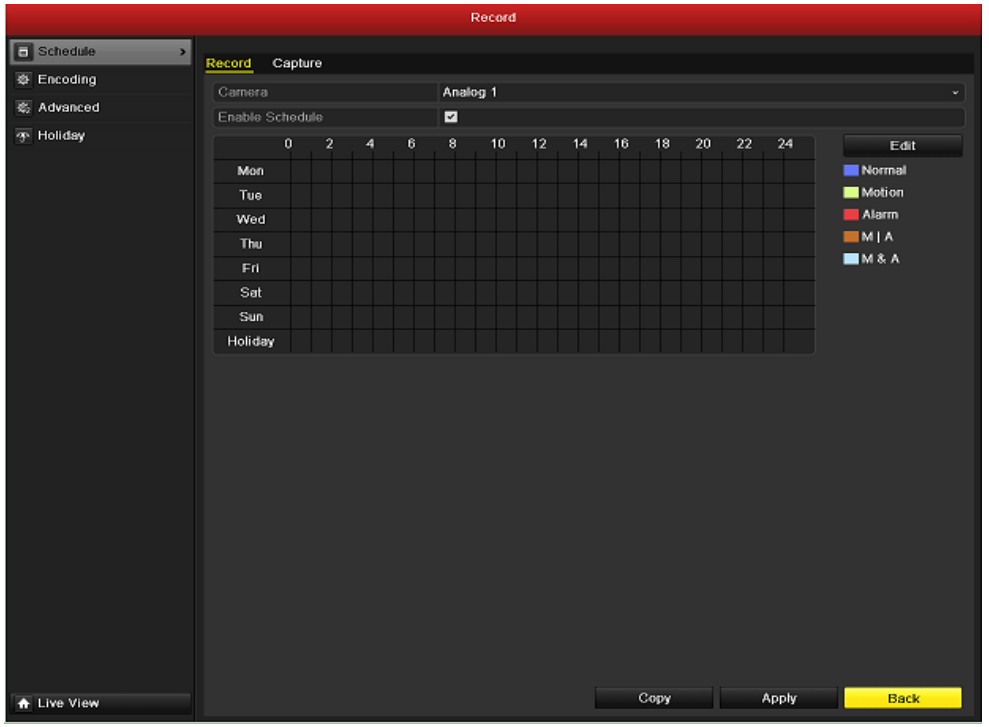


Figure 6.7 Record Schedule

6.2 Configuring Record/Capture Schedule

Set the record schedule, and then the camera will automatically start/stop recording according to the configured schedule. ***Steps:***

1. Enter the Record Schedule interface. Menu>Record/Capture>Schedule

2. Configure Record Schedule:

1) Select Record/Capture Schedule.
2) Choose the camera you want to configure.
3) Select the check box after the **Enable Schedule** item.
4) Click **Edit**.
5) In the message box, you can choose the day to which you want to set schedule.
6) To schedule an all-day recording, check the checkbox after the **All Day** item.
7) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time. ***Note:*** Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other. Repeat the above steps 5) - 7) to schedule recording/capture for other days in the week. If the schedule can also be set to other days, click **Copy**.
8) Click **OK** to save setting and back to upper level menu.

9) Click **Apply** in the Record Schedule interface to save the settings.

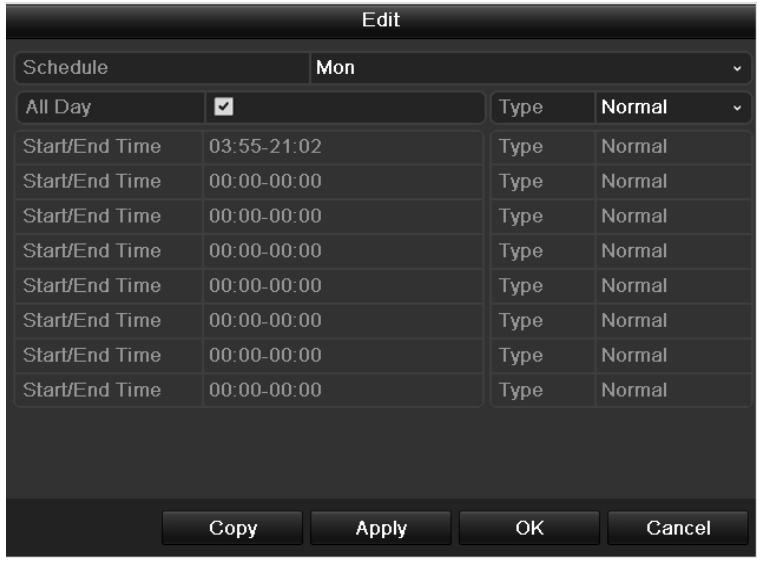


Figure 6.8 Edit Schedule

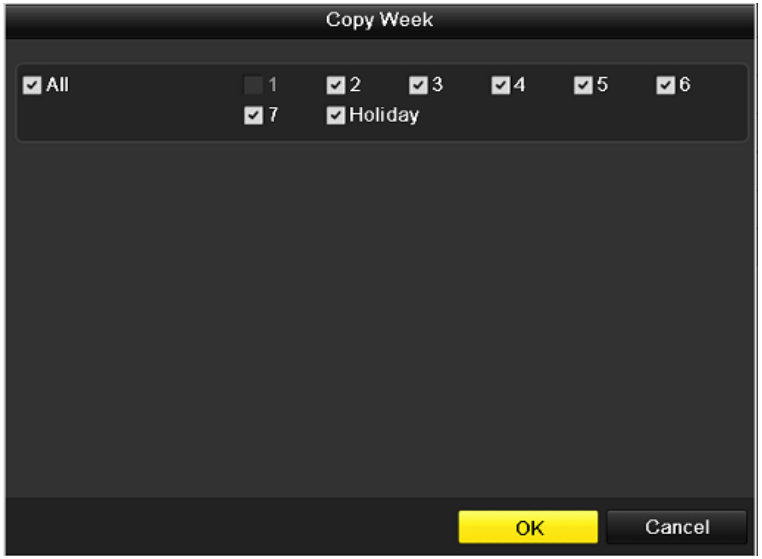


Figure 6.9 Copy Schedule to Other Days

You can repeat steps 5) - 8) to set schedule for other channels. If the settings can also be used to other channels, click **Copy**, and then choose the channel to which you want to copy.

Figure 6.10 Copy Schedule to Other Channels

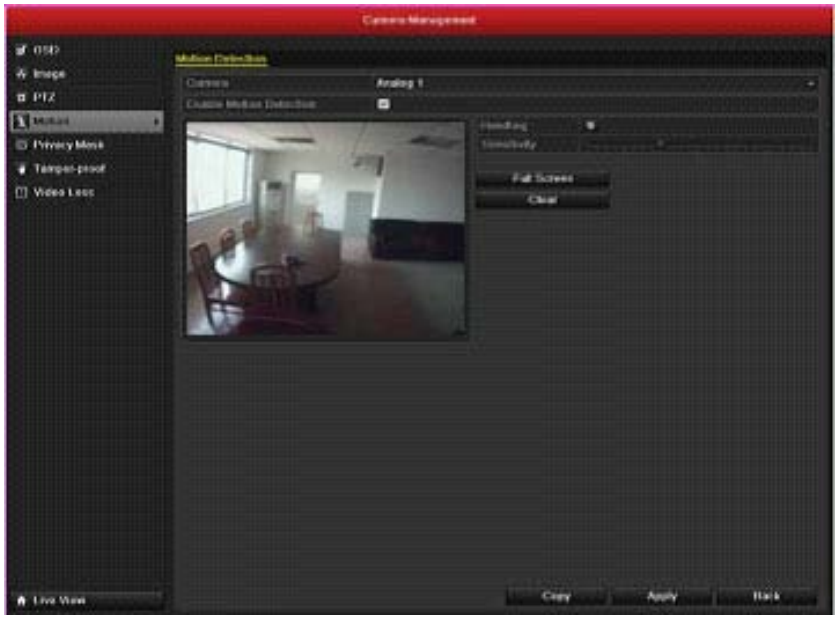


Figure 6.11 Motion Detection

6.3 Configuring Motion Detection Record and Capture

Follow the steps to set the motion detection parameters. In the live view mode, once a motion detection event takes place, the video can analyze it and do many actions to handle it. Enabling motion detection function can trigger certain channels to start recording or trigger full screen monitoring, audio warning, notify the surveillance center and so on. ***Steps:***

1. Enter the Motion Detection interface. Menu>Camera>Motion

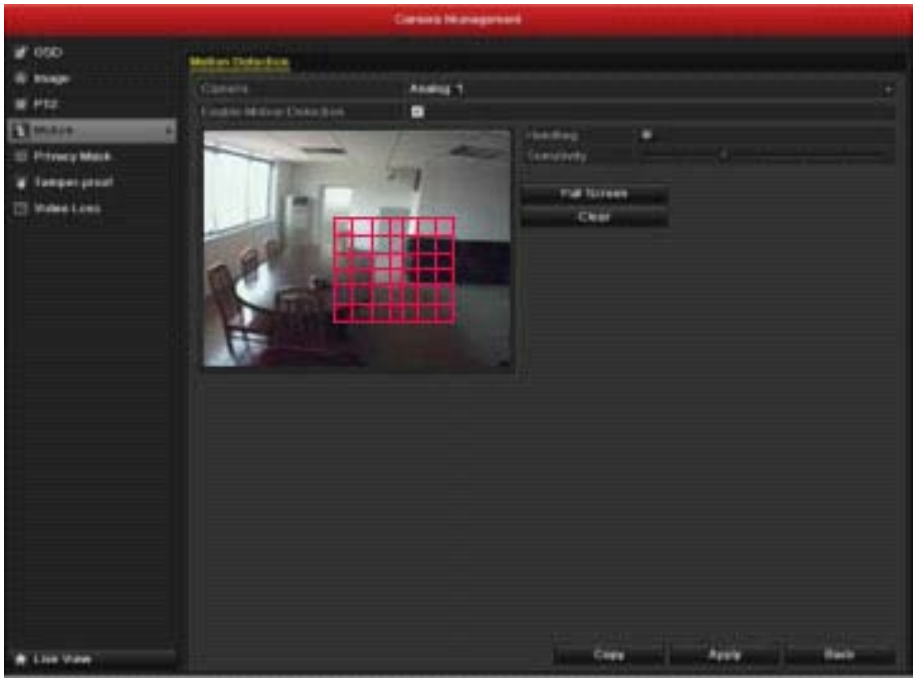


Figure 6.12 Motion Detection- Mask

Figure 6.13 Motion Detection Handling

2. Configure Motion Detection：

1) Choose camera you want to configure.
2) Check the checkbox after **Enable Motion Detection**.
3) Drag and draw the area for motion detection by mouse. If you want to set the motion detection for all the area shot by the camera, click **Full Screen**. To clear the motion detection area, click **Clear**.
4) Click **Handling**, and the message box for channel information will pop up.
5) Select the channels which you want the motion detection event to trigger recording.
6) Click **Apply** to save the settings.
7) Click OK to back to the upper level menu.

8) Exit the Motion Detection menu.

3. Enter Schedule settings interface. Menu> Record> Schedule>Record/Capture Schedule

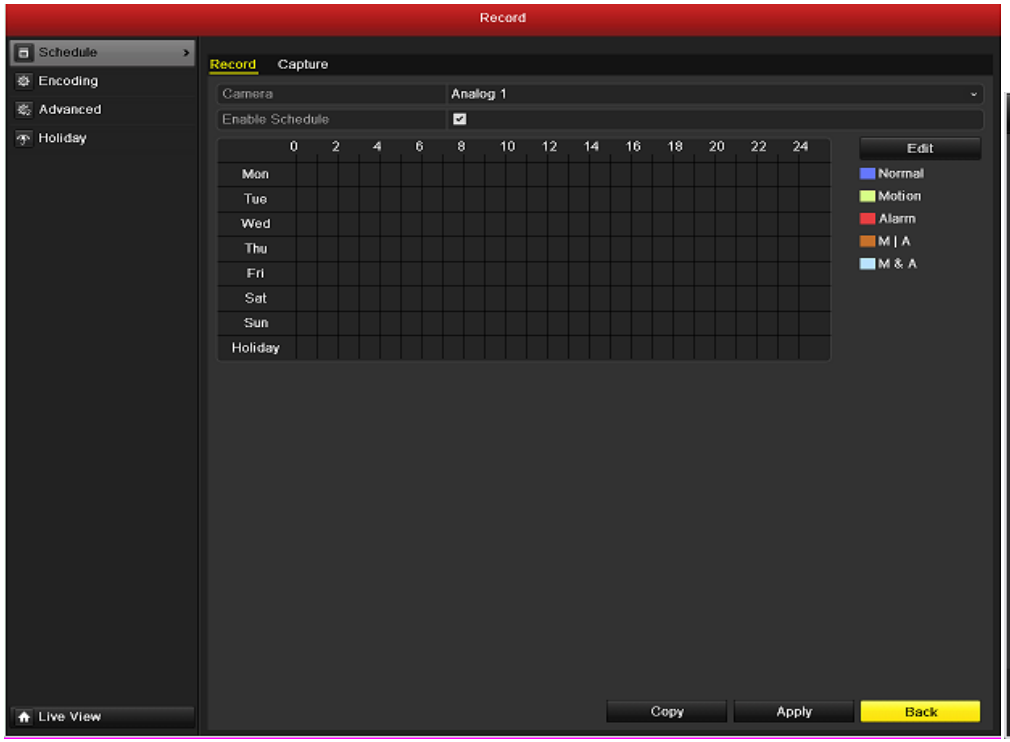


Figure 6.14 Record Schedule

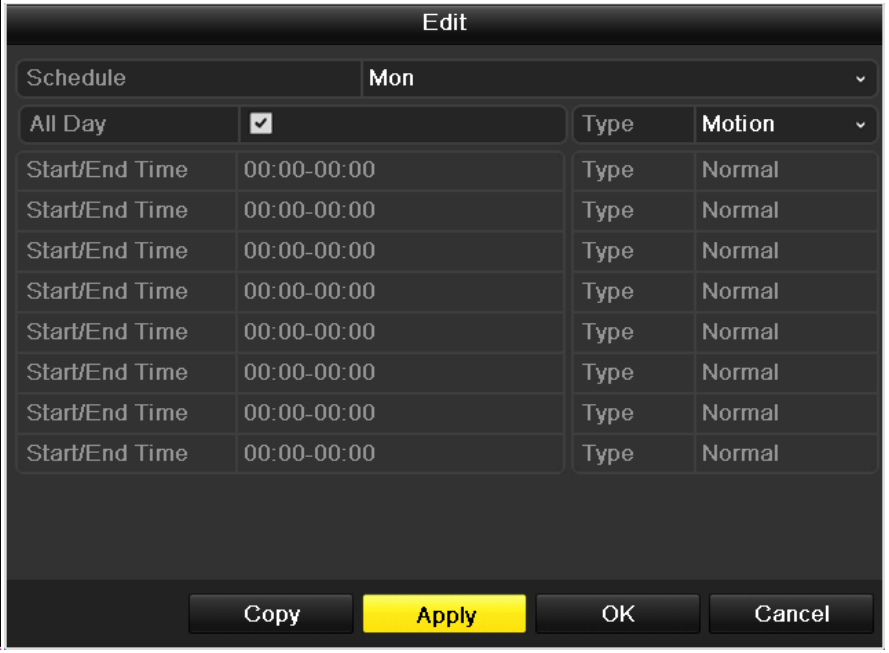


Figure 6.15 Edit Schedule- Motion Detection

1) Check the checkbox after the **Enable Schedule** item.
2) Click **Edit**.
3) In the message box, you can choose the day to which you want to set schedule.
4) Set the **Type** as Motion.
5) To schedule an all-day recording, check the checkbox after the **All Day** item.
6) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.
Repeat the above steps11)-13) to schedule motion detection triggered recording/capture for all the week. If the schedule can also be set to other days, click **Copy**.

7) Click **OK** to back to upper level menu.

You can repeat steps to set schedule for other channels, if the settings can also be used to other channels, click **Copy**, and then choose the channel to which you want to copy.

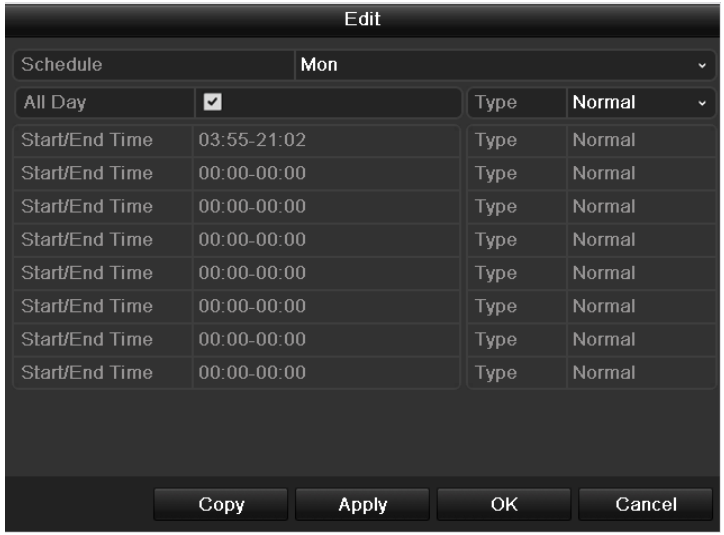


Figure 6.16 Edit Schedule- All Day

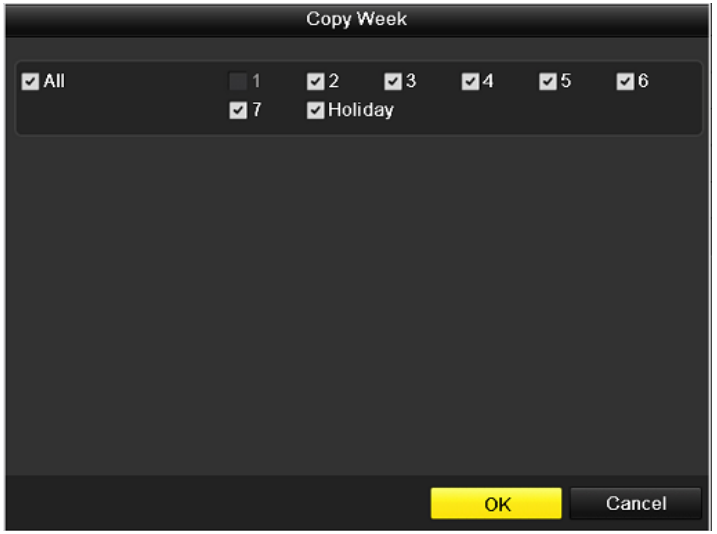


Figure 6.17 Copy Schedule to Other Days

Figure 6.18 Copy Schedule to Other Channels

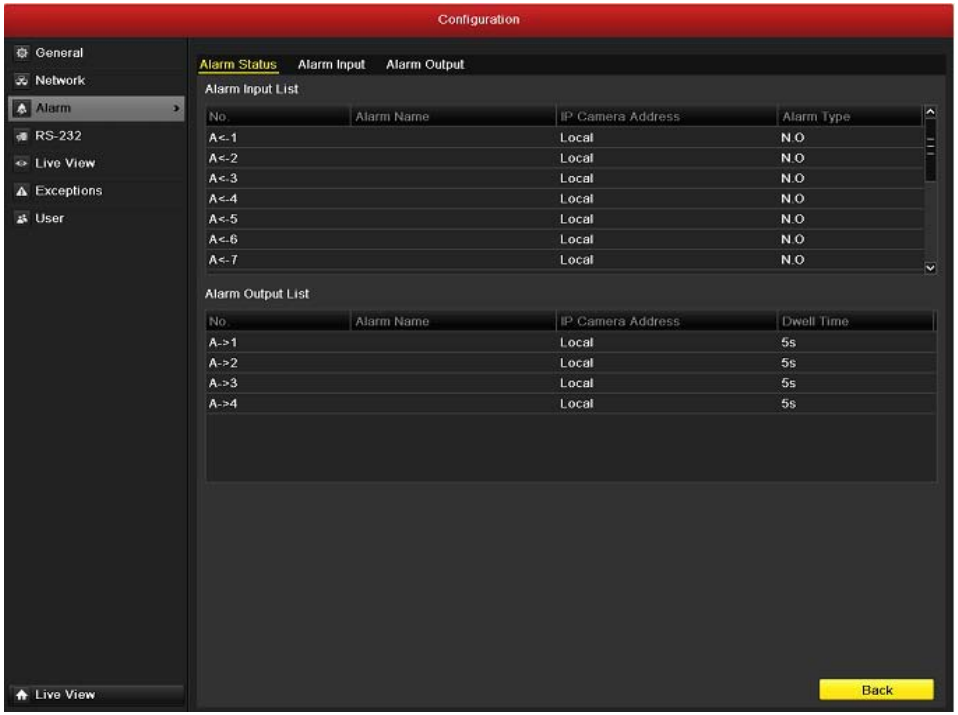


Figure 6.19 Alarm Settings

6.4 Configuring Alarm Triggered Record and Capture

Follow the procedure to configure alarm triggered recording or capture. ***Steps:***

1. Enter the Alarm setting interface. Menu> Configuration> Alarm

2. Click **Alarm Input**.

1) Select Alarm Input number and configure alarm parameters.
2) Choose N.O (normally open) or N.C (normally closed) for alarm type.
3) Check the checkbox for Setting ☑.
4) Click **Handling**.
5) Choose the alarm triggered recording channel.
6) Check the checkbox ☑ to select channel.
7) Click **Apply** to save settings.
8) Click **OK to** back to the upper level menu. Repeat the above steps to configure other alarm input parameters.

If the setting can also be applied to other alarm inputs, click **Copy** and choose the alarm input number.

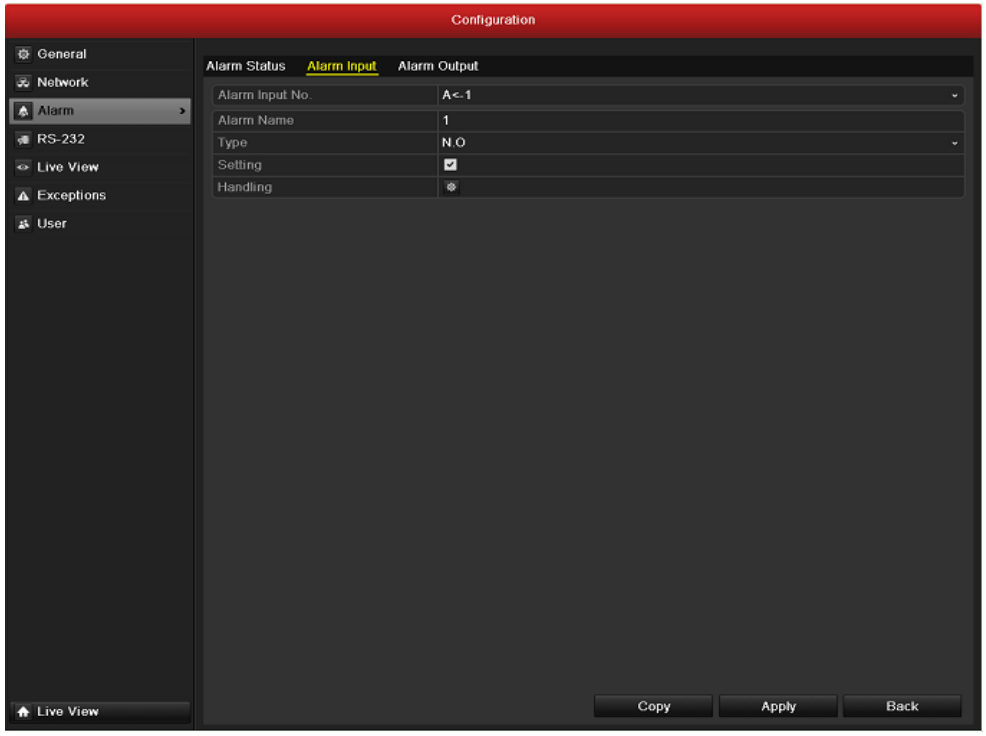


Figure 6.20 Alarm Settings- Alarm Input

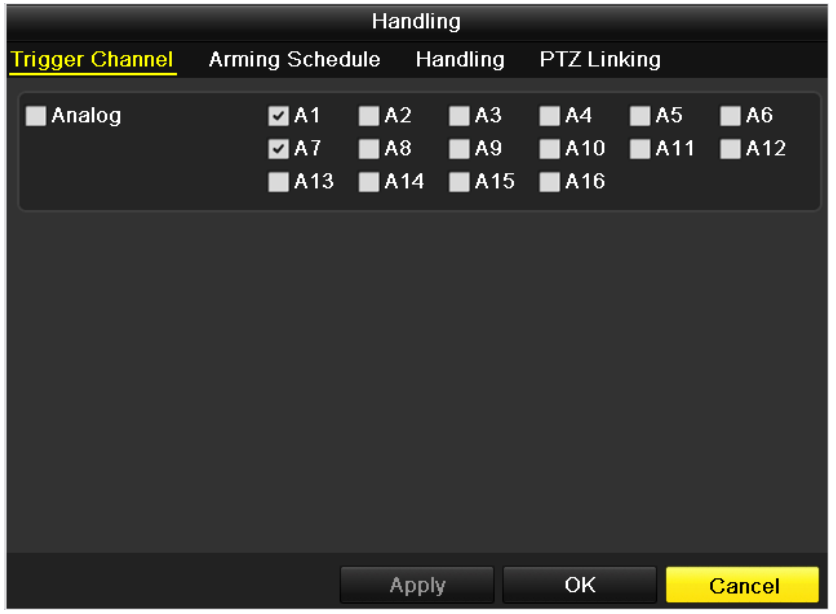


Figure 6.21 Alarm Handling

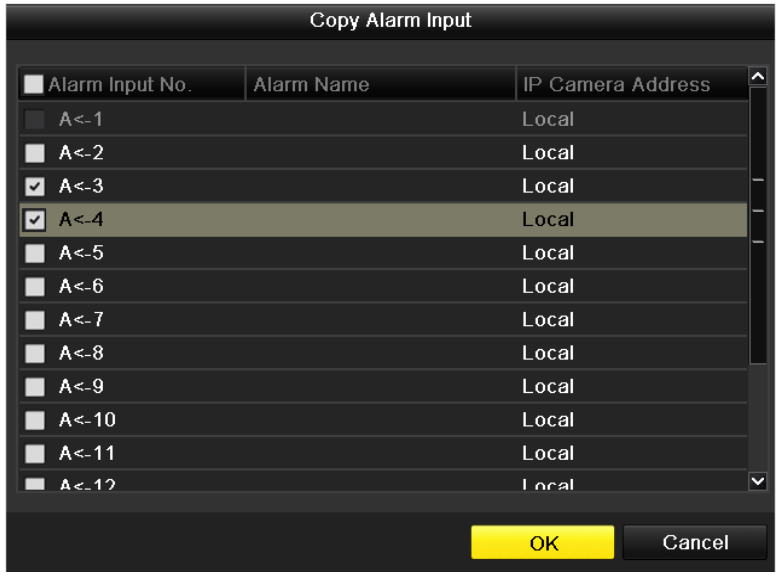


Figure 6.22 Copy Alarm Input

Figure 6.23 Record Schedule

3. Enter Record/Capture Schedule setting interface. Menu> Record> Schedule

1) Click Record/Capture Schedule
2) Check the checkbox after the **Enable Schedule**.
3) Click **Edit**.
4) Set the **Type** to **Alarm**
5) In the message box, you can choose the day to which you want to set schedule.
6) To schedule an all-day recording, check the checkbox after the **All Day** item.
7) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.
Repeat the above steps4)-7) to schedule alarm triggered recording/capture for all the week. If the schedule can also be set to other days, click **Copy**.

8) Click **OK** to back to the upper level menu.

6.5 Manual Record and Continuous Capture

Follow the steps to set parameters for the manual record and continuous capture. Using manual record and continuous capture, you don't need to set a schedule for recording or capture. ***Steps:***

1. Enter the Manual settings interface. Menu> Manual Or press the **REC/SHOT** button on the front panel.

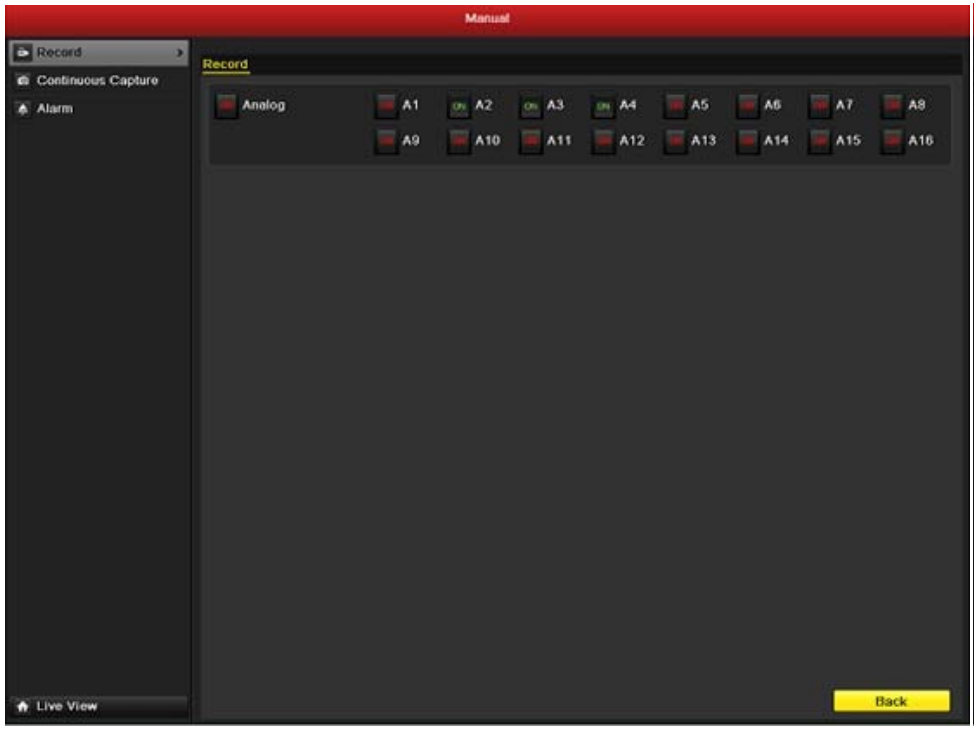


Figure 6.24 Manual Record

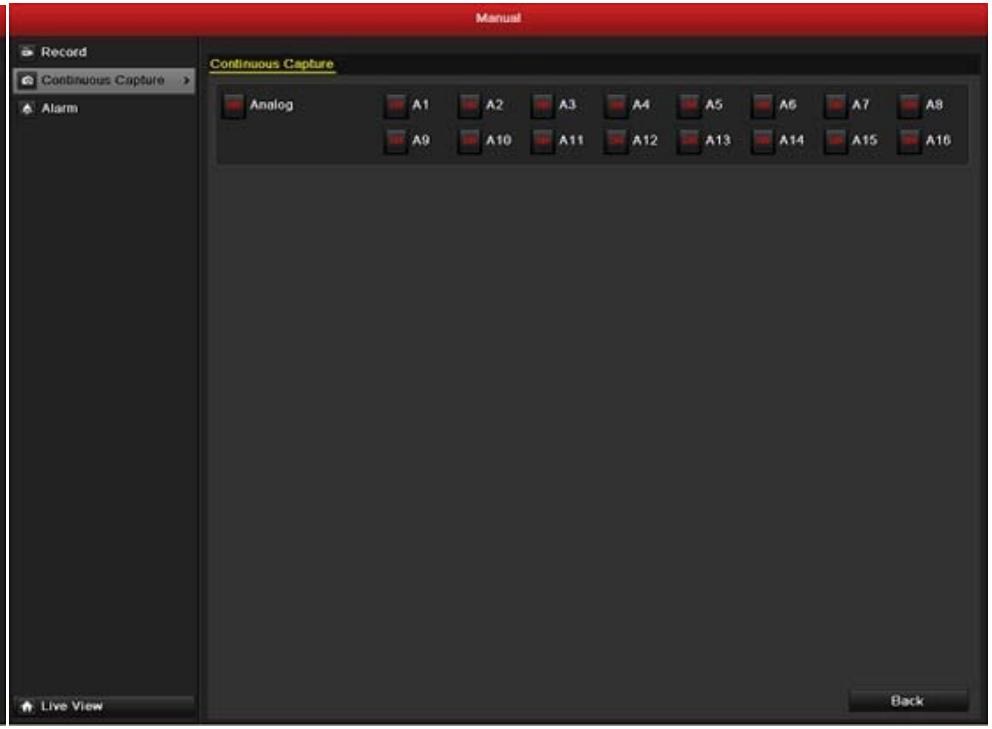


Figure 6.25 Continuous Capture

2. Enabling Manual Record

1) Select **Record** on the left bar.

2) Click the status button before camera number to change OFF to ON.

3. Disable manual record.

Click the status button to change ON to OFF.

Note: After rebooting all the manual records enabled are canceled.

4. Enabling and disabling the continuous capture

1) Select **Continuous Capture** on the left bar.
2) Click the status button before camera number to change OFF to ON.
3) Disable continuous capture.
4) Click the status button to change ON to OFF.

Note: After rebooting, all the continuous capture will be canceled.

6.6 Configuring Holiday Record and Capture

Follow the steps to configure the record or capture schedule on holiday for that year. You may want to have different plan for recording and capture on holiday. ***Steps:***

1. Enter the Record setting interface. Menu>Record
2. Choose **Holiday** on the left bar.

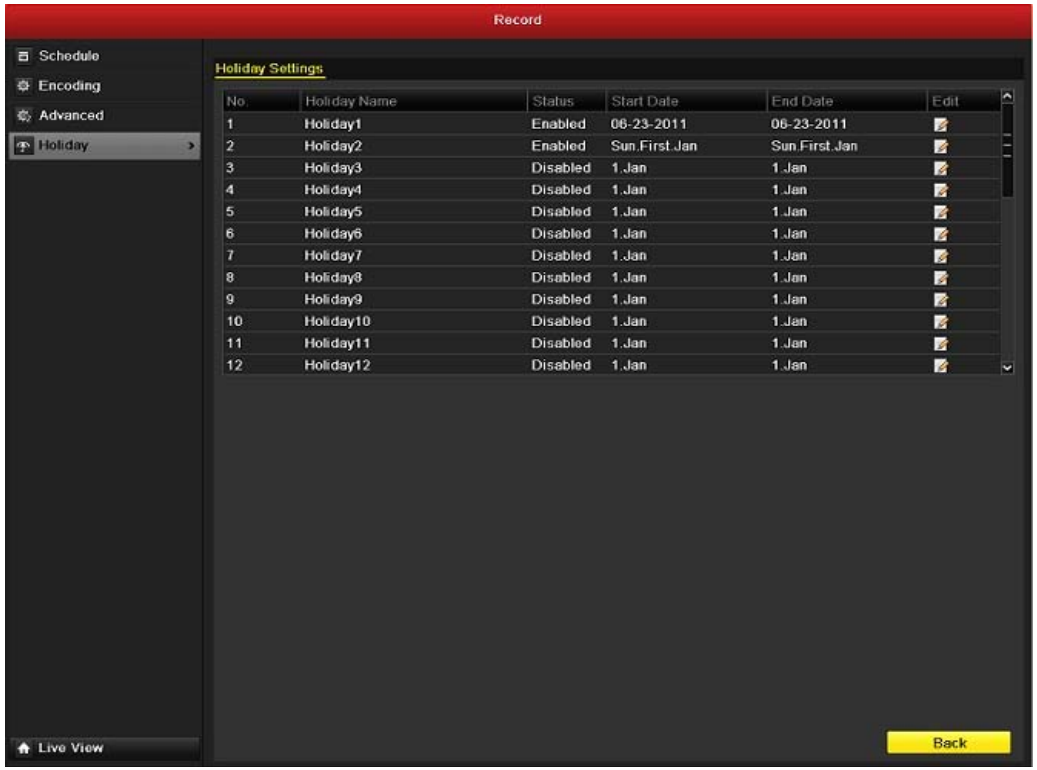


Figure 6.26 Holiday Settings

Figure 6.27 Edit Holiday Settings

3. Enable Edit Holiday schedule.

1) Click to enter the Edit interface.
2) Check the checkbox after **Enable Holiday**.
3) Select Mode from the dropdown list. There are three different modes for the date format to configure holiday schedule.
4) Set the start and end date.
5) Click **Apply** to save settings.
6) Click **OK** to exit the Edit interface.

4. Enter Record/Capture Schedule settings interface. Menu> Record> Schedule

1) Select **Record/Capture.**
2) Check the checkbox after **Enable Schedule**.
3) Click **Edit.**
4) Select **Holiday** from the **Schedule** dropdown list.
5) Select **Motion** from the **Type** dropdown list.
6) If you need all day recording, check the **All Day** checkbox. Otherwise leave it blank.
7) Set start/end time for holiday schedule.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other. In the time table of the channel, both holiday schedule and normal day schedule are displayed.
Repeat the above steps4)-7) to set Holiday schedule for other channel. If the holiday schedule can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

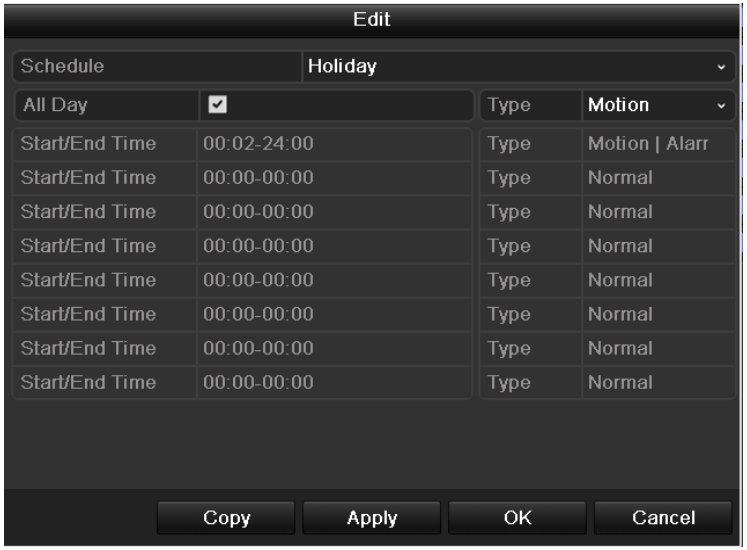


Figure 6.28 Edit Schedule- Holiday

6.7 Configuring Other Recording and Capture

Other recording and capture types refer to the Motion | Alarm (motion or alarm) and Motion & Alarm triggered recording and capture. For motion detection and alarm recording and capture, please refer to *Section 6.3 and Section 6.4*. In this chapter, the configuration for Motion | Alarm (motion or alarm) and Motion & Alarm triggered recording and capture will be described only. ***Steps:***

1. Enter the Record setting interface. Menu-> Record-> Schedule

2. Select **Record/ Capture.**

3. Schedule Motion | Alarm or Motion & Alarm triggered recording.

1) Select the channel you want to set schedule.
2) Check the check box after Enable Schedule. Click **Edit**.
3) Select Motion | Alarm or Motion & Alarm in the **Type** dropdown list.
4) To schedule an all-day recording, select the checkbox after the **All Day** item.
5) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time. **Note:** Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other. Repeat the above steps to schedule for all the week. If the schedule can also be applied to other days, click **Copy**.
6) Click **Apply** to save settings. Click **OK** to back to the upper level menu.

Repeat the above steps to schedule Motion | Alarm or Motion & Alarm triggered recording/capture to other channels. If the setting can also be applied to other channels, click **Copy** and then choose the channel number.

Figure 6.29 Record Schedule

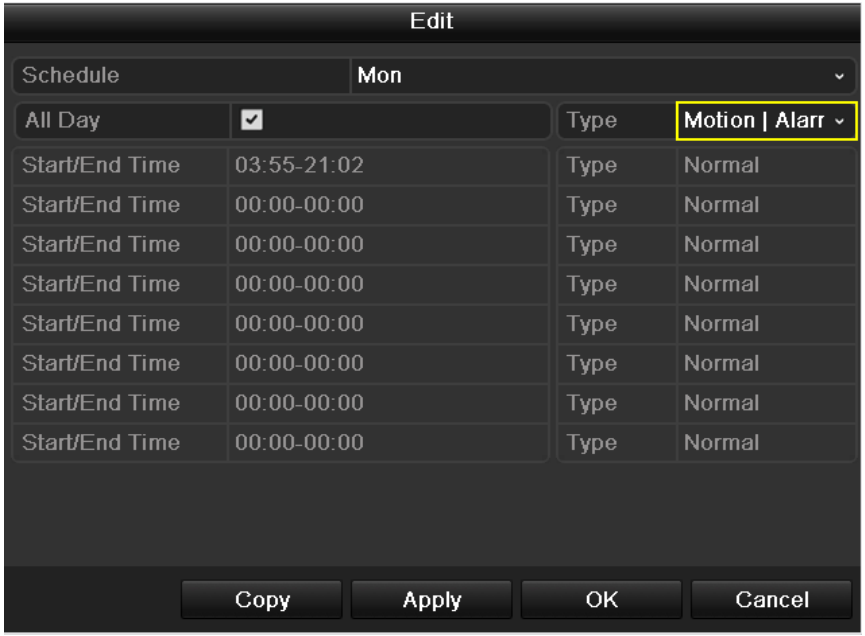


Figure 6.30 Edit Schedule- Motion| Alarm

6.8 Configuring Redundant Recording and Capture

Enabling redundant recording and capture, which means saving the record files and captured pictures not only in the R/W HDD but also in the redundant HDD, will effectively enhance the data safety and reliability. ***Steps:***

1. Enter HDD Information interface. Menu-> HDD

2. Select the **HDD** and click to enter the Local HDD Settings interface.

1) Set the HDD property to Redundant.
2) Click **Apply** to save the settings.
3) Click **OK** to back to the upper level menu.

Note: You must set the Storage mode in the HDD advanced settings to Group before you set the HDD property to Redundant. For detailed information, please refer to *Section 13.4 Managing HDD Group*. There should be at least another HDD which is in Read/Write status.

3. Enter the Record setting interface. Menu-> Record-> Encoding

1) Select **Record.**
2) Select Camera you want to configure.
3) Click **More Settings.**
4) Set the **Redundant Record/Capture** to **Yes**.
5) Click **OK** to save settings and back to the upper level menu. Repeat the above steps for configuring other channels.

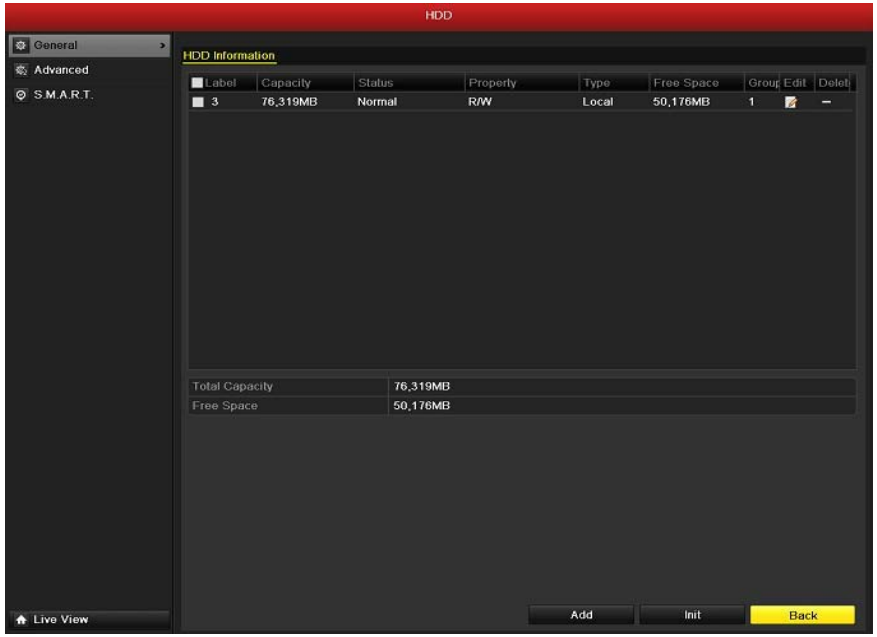


Figure 6.31 HDD General

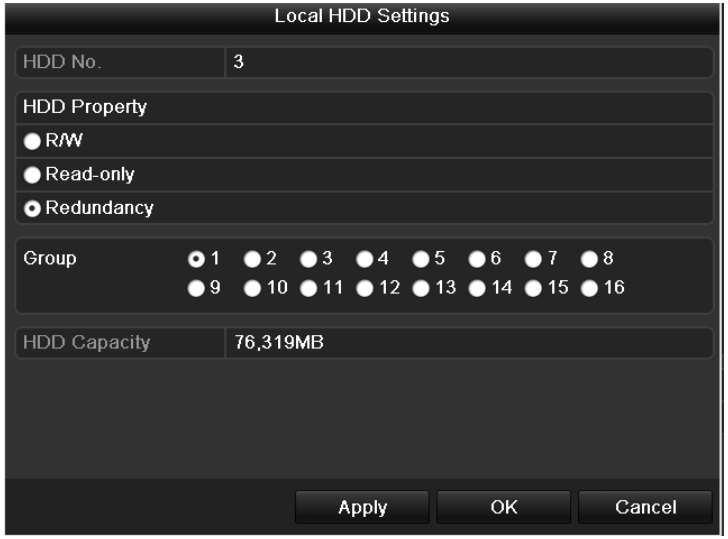


Figure 6.32 HDD General-Editing

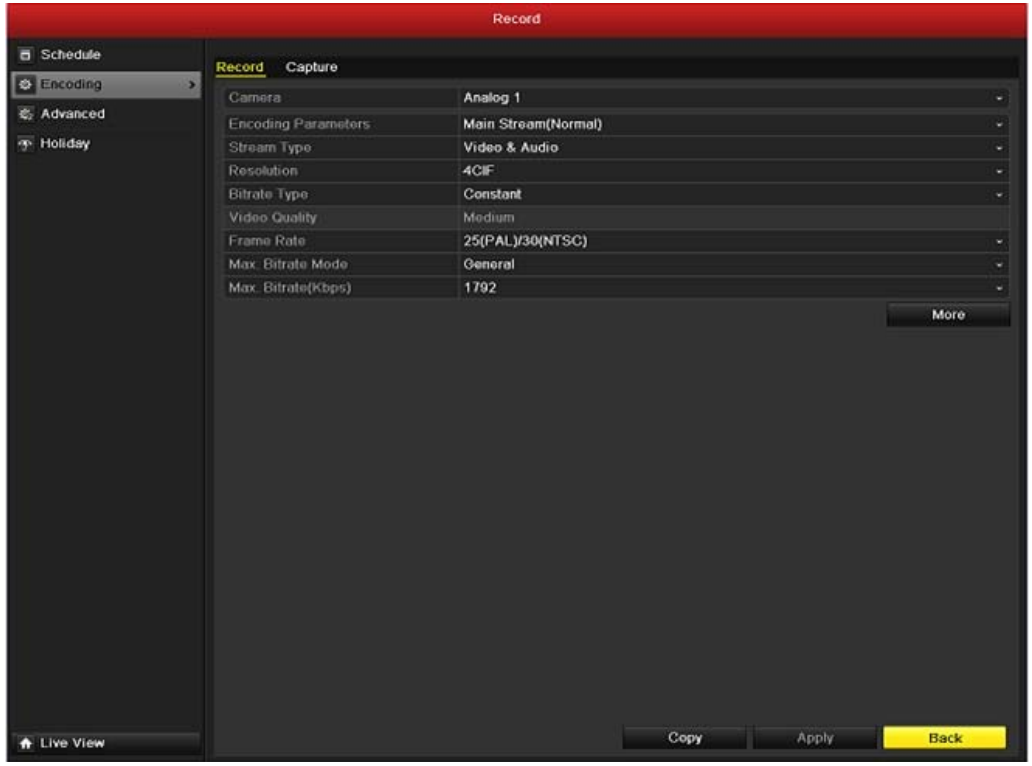


Figure 6.33 Encoding Record

Figure 6.34 Encoding Record- More

6.9 Configuring HDD Group for Recording and Capture

You can group the HDDs and save the record files and captured pictures in certain HDD group. ***Steps:***

1. Enter HDD setting interface. Menu>HDD

2. Select **Advanced** on the left bar. Check whether the storage mode of the HDD is Group. If not, set it to Group. For detailed information, please refer to *Section 13.4 Managing HDD Group*.

3. Select **General** in the left bar. Click to enter editing interface.

4. Configuring HDD group.

1) Choose a group number for the HDD group.
2) Click **Apply** and then in the pop-up message box, click **Yes** to save your settings.
3) Click **OK** to back to the upper level menu. Repeat the above steps to configure more HDD groups.

5. Choose the Channels which you want to save the record files and captured pictures in the HDD group.

1) Select **Advanced** on the left bar.
2) Choose Group number in the dropdown list of **Record on HDD Group**
3) Check the channels you want to save in this group.
4) Click **Apply** to save settings.

Note: After you have configured the HDD groups, you can configure the Recording and Capture settings following the procedure provided in Section *6.2-6.7*.

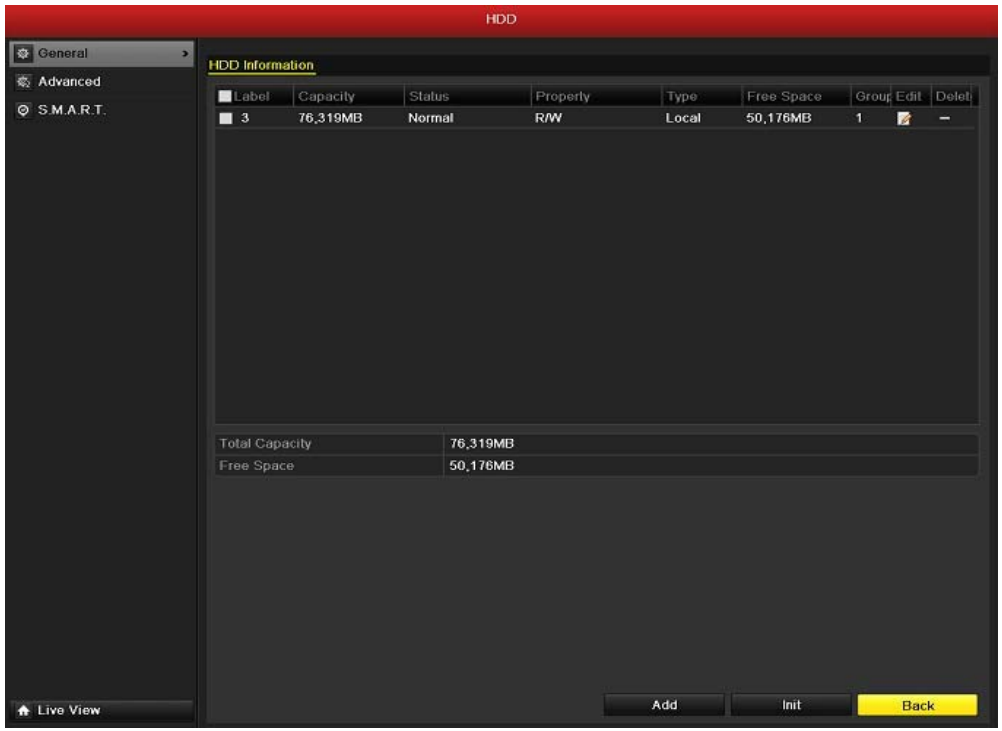


Figure 6.35 HDD General

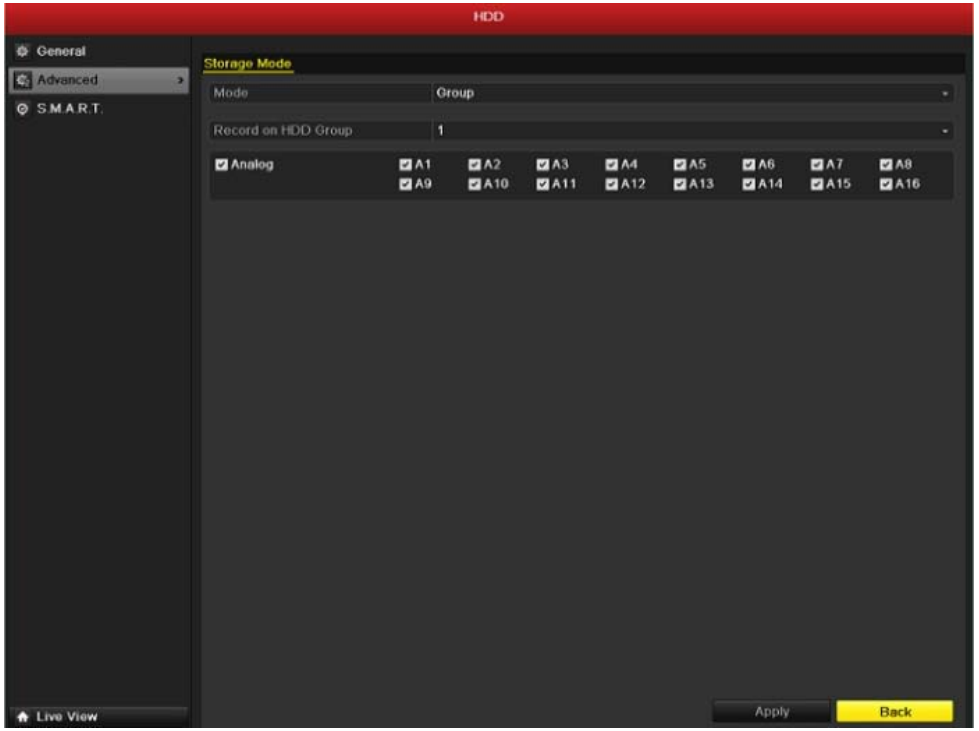


Figure 6.36 HDD Advanced

6.10 Files Protection

You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

6.10.1 Protect file by locking the record files

Steps:

1. Enter Playback setting interface. Menu> Playback

2. Select the channels you want to investigate by checking the checkbox to
3. Configure the record type, file type start/end time
4. Click **Search** to show the results.
5. Protect the record files.

1) Find the record files you want to protect, and then click the icon which will turn to , indicating that the file is locked.

Note: Only the record files with size bigger than 1GB can be locked, otherwise it can't be protected by locking it.

2) Click to change it to to unlock the file and the file is not protected.

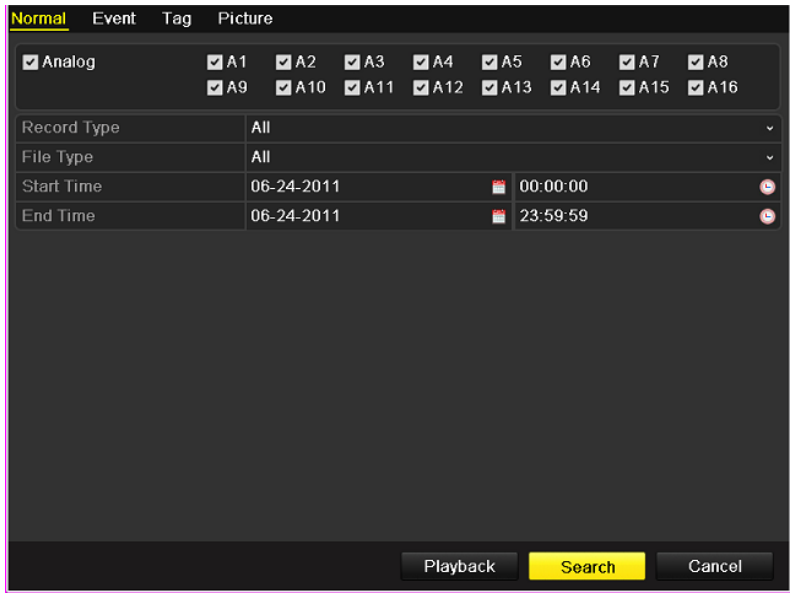


Figure 6.37 Playback

Figure 6.38 Playback- Search Result

Figure 6.39 Unlocking Attention

6.10.2 Protect file by setting HDD property to Read-only

Steps:

1. Enter HDD setting interface. Menu-> HDD
2. Click to edit the HDD you want to protect.

   Note: To edit HDD property, you need to set the storage mode of the HDD to Group. See *Section 13.4 Managing HDD Group*.
3. Set the HDD to Read-only.
4. Click **OK** to save settings and back to the upper level menu.

Note: You can't save any files in a Read-only HDD. If you want to save files in the HDD, change the property to R/W. If there is only one HDD and is set to Read-only, the DVR can't record any files. Only live view mode is available. If you set the HDD to Read-only when the DVR is saving files in it, then the file will be saved in next R/W HDD. If there is only one HDD, the recording will be stopped.

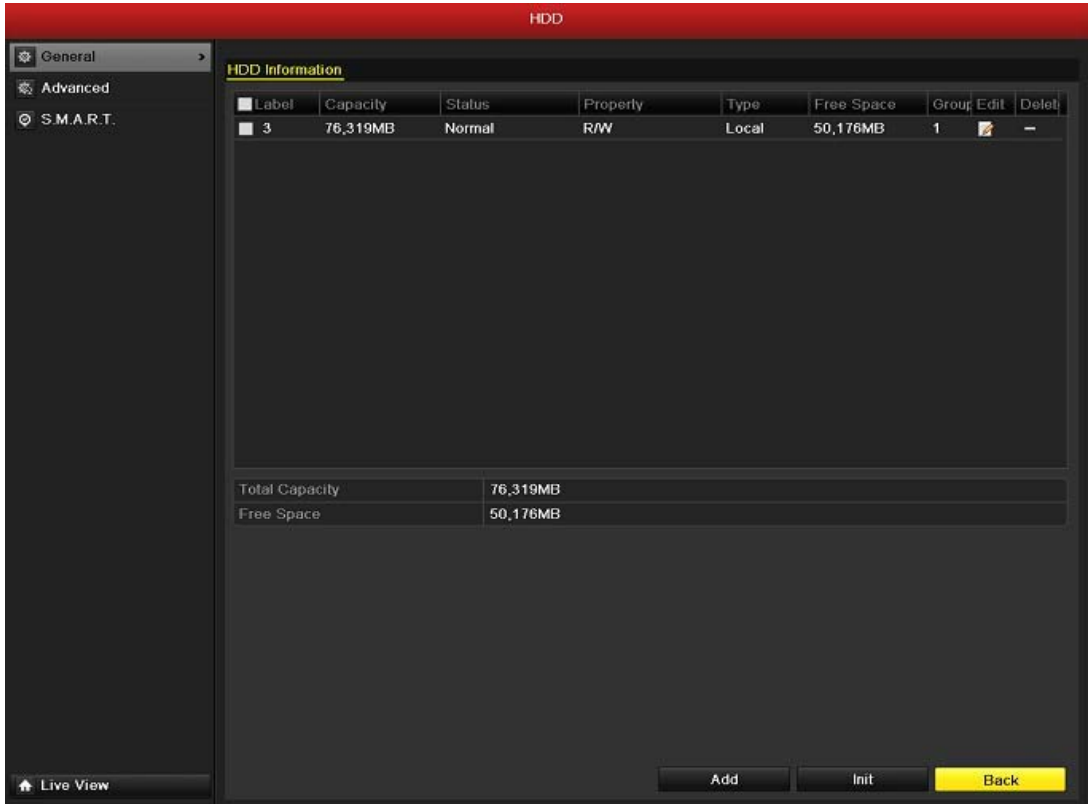


Figure 6.40 HDD General

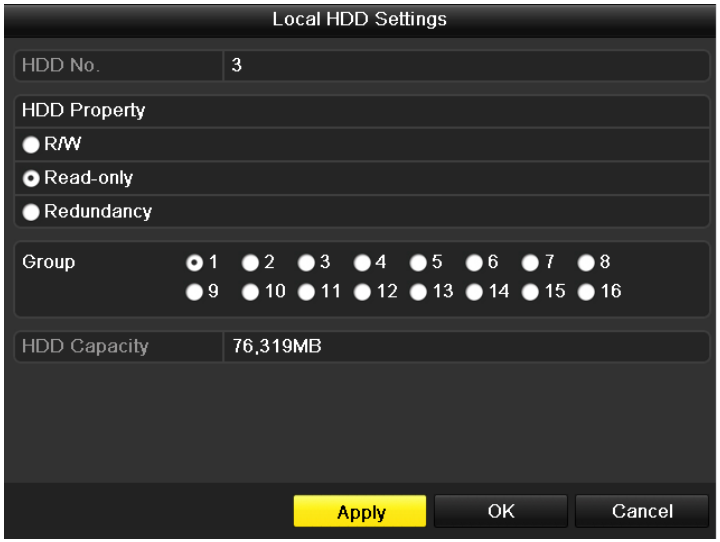


Figure 6.41 HDD General- Editing

7 Playback

7.1 Play Back Record Files

7.1.1 Play Back by Channel

Play back the recorded video files of a specific channel in the live view mode. Channel switch is supported.

Instant playback by channel

Choose a channel in live view mode using the mouse and click the button in the quick setting toolbar.
Note: Only recorded files during the previous last five minutes on this channel will be played back.

Figure 7.1 Instant Playback Interface

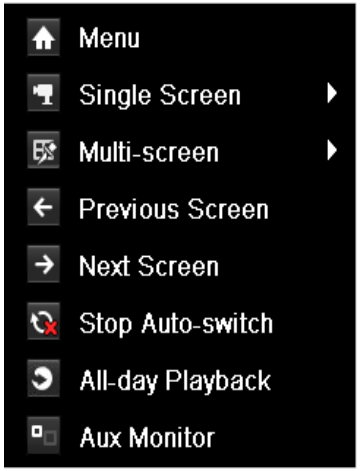


Figure 7.2 Right-click Menu under Live View mode.

All-day Playback by channel

1. Enter the All-day Playback interface.

Mouse: right click a channel in live view mode and select All-day Playback from the menu, as shown in Figure 7.2.

Front Panel: press PLAY button to play back record files of the channel under single-screen live view. Under multi-screen live view mode, the recorded files of the top-left channel will be played back.
Note: Pressing numerical buttons will switch playback to the corresponding channels during playback process.

2. Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing progress, as shown in Figure 7.3.

Figure 7.3 All-day Playback Interface

Figure 7.4 All-day Playback Interface with Channel List

The channel and time selection menu displays by moving the mouse to the right of the playback interface. Click the channel(s) if you want to switch playback to another channel or execute simultaneous playback of multiple channels, as shown in Figure 7.4.

Dates marked in colors:

11 : No record files in this day.

9 : There is record file(s) in this day (not current day).

10 : Mouse cursor is located.

Figure 7.5 Toolbar of All-day Playback

Table 7.1 Detailed Explanation of All-day-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on /Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/ Reverse play/ Single-frame reverse play	/	Pause play/ Play/ Single-frame play		Stop		Speed up
	Previous day		Next day		Hide		Exit
	Process bar		Video type bar				

Note:
1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

7.1.2 Playing Back by Time

Play back video files recorded in specified time duration. Multi-channel simultaneous playback and channel switch are supported. ***Steps:***

1. Enter playback interface. Menu->Playback
2. Set search conditions and click the Playback button to enter Playback interface.

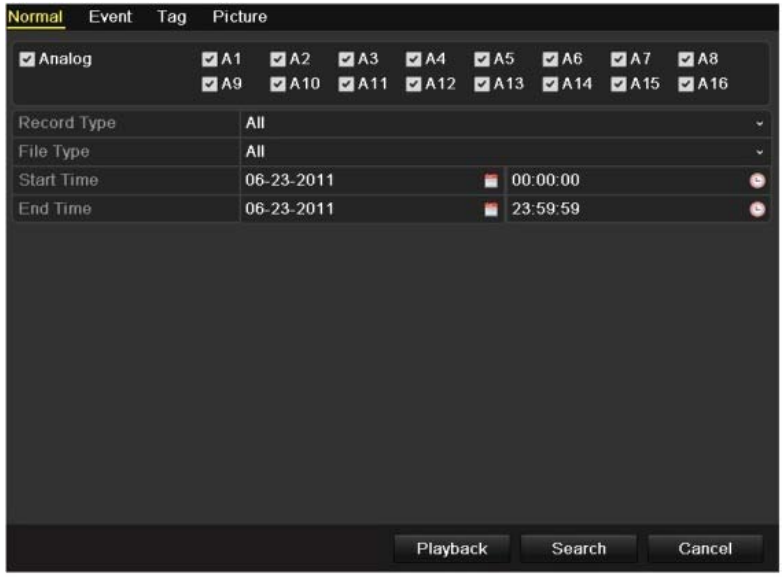


Figure 7.6 Video Search by Time

Figure 7.7 Interface of Playback by Time

In the Playback interface, the toolbar in the bottom part of Playback interface can be used to control playing process, as shown in Figure 7.7.

Figure 7.8 Toolbar of Playback by Time

Table 7.2 Detailed Explanation of Playback-by-time Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation

/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Video search		Exit		Hide		Progress bar
	Video type bar						

Note:
1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion, alarm, motion | alarm, motion & alarm).

7.1.3 Playing Back by Normal Video Search

Play back video files searched out by restricting recording type and recording time. The video files in the result list are played back sequentially and channel switch is supported. Recording types contain Normal, Motion, Alarm, Motion / Alarm, Motion & Alarm, Manual and All. ***Steps:***

1. Enter Record File Search interface. Menu>Playback. Set search condition and press Search button to enter the Search Result interface.

2. Choose a record file you want to play back.

If there is only one channel in the search result, pressing button takes you to Full-screen Playback interface of this channel. If more than one channel is optional, pressing button takes you to step 3 and step 4.

3. Choose channels for simultaneous playback.

Note: Optional channels for simultaneous playback are the same as the channels chosen to search record files in step 1. And the channel with the recorded file selected in step 2 is the main channel during multi-channel playback and it is displayed at the upper left corner. 4-ch, 8-ch and 16-ch devices support 4-ch, 8-ch and 16-ch simultaneous playback respectively.

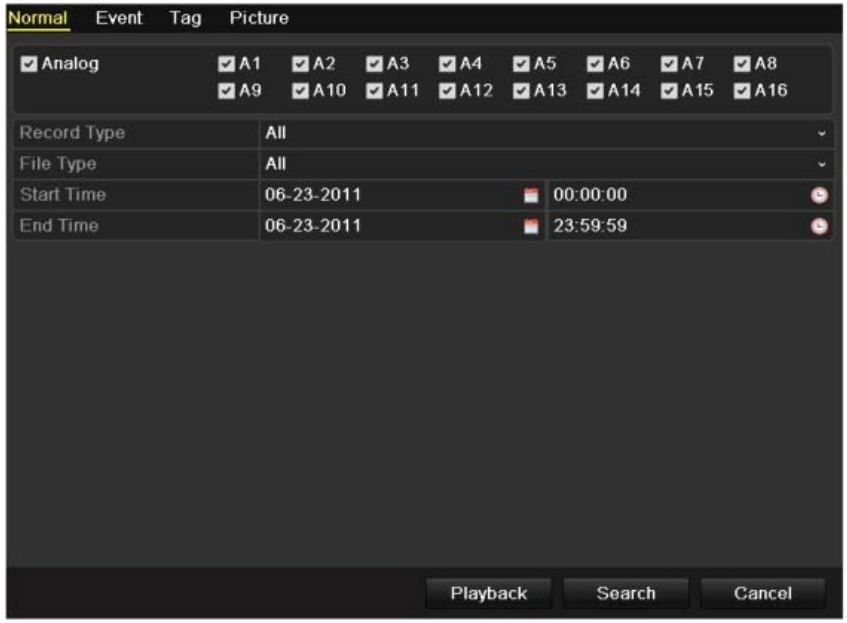


Figure 7.9 Normal Video Search

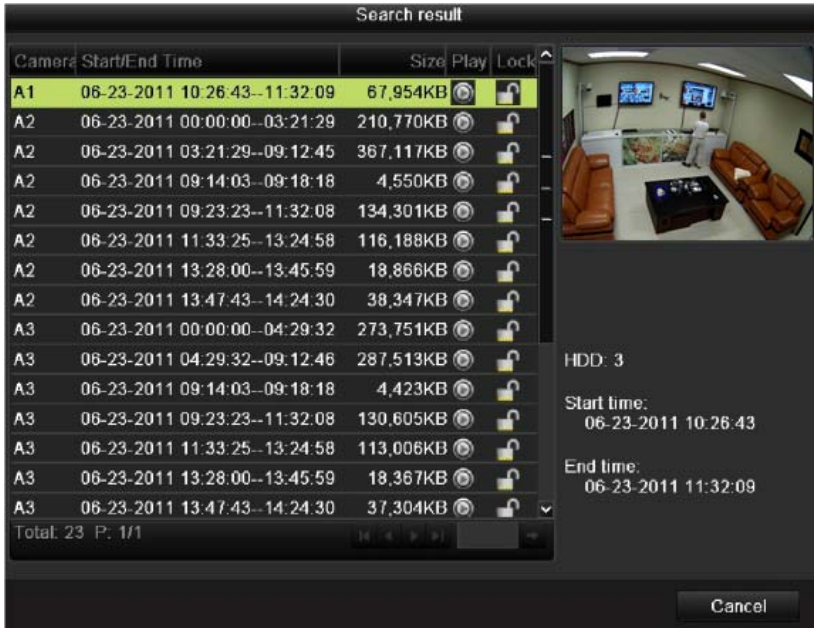


Figure 7.10 Result of Normal Video Search

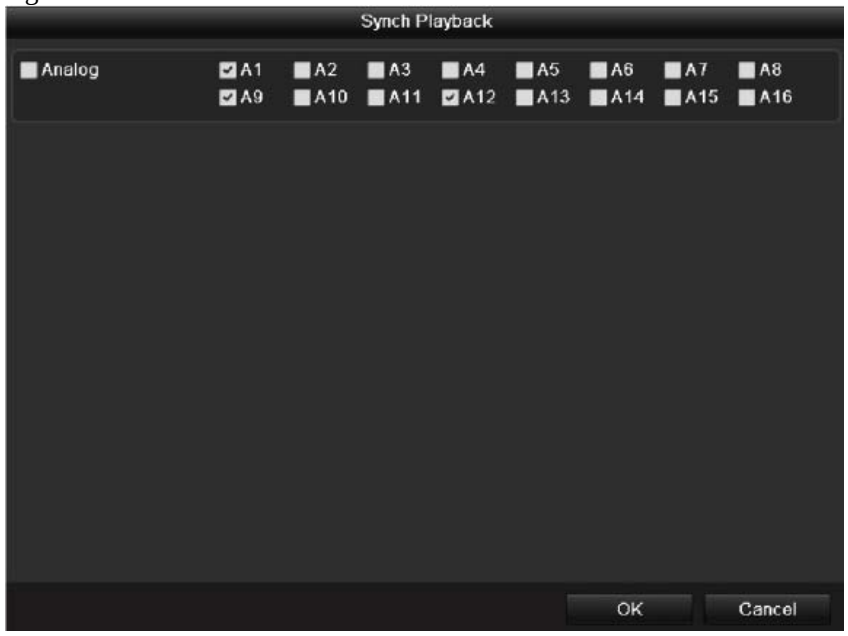


Figure 7.11 Select Channels for Synchronous Playback

4. Synchronous Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 7.12 4-ch Synchronous Playback Interface

Figure 7.13 4-ch Synchronous Playback Interface with Video List

The hidden list of recorded files displays by moving the mouse to the right of the playback interface.

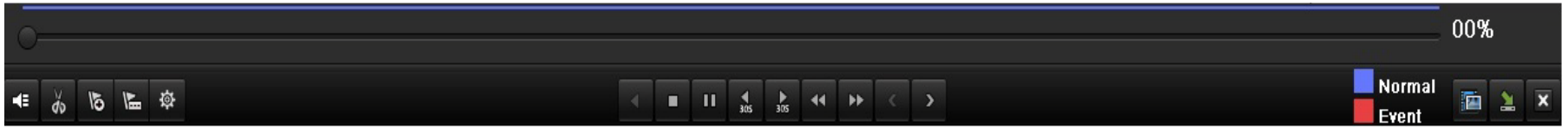
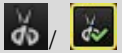


Figure 7.14 Toolbar of Normal Playback

Table 7.3 Detailed Explanation of Normal-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
	Pause reverse play/Reverse play/ Single-frame reverse play		Pause playing/Play/Single-frame play		Stop		Speed up
	Previous file		Next file		Video search		Exit
	Hide toolbar		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

7.1.4 Playing Back by Event Search

Play back record files on one or several channels searched out by restricting event type (e.g. alarm input and motion detection). Channel switch is supported. ***Steps:***

1. Enter the playback interface. Menu>Playback
2. Select Event tab to enter the Event Playback interface.
3. Select **Alarm Input** as the event type.
4. Click **Search** button to enter the Search Result interface. If you want to play back recorded files associated with motion detection, choose **Motion** as event type and click **Search** button to enter the Search Result interface.
5. Click button to enter the Playback interface.

If there is only one channel is triggered by an alarm input, pressing button takes you to Full-screen Playback interface of this channel.

If several channels are triggered, pressing button takes you to step 7 and then step 8.

Note: Pre-play and post-play can be configured.

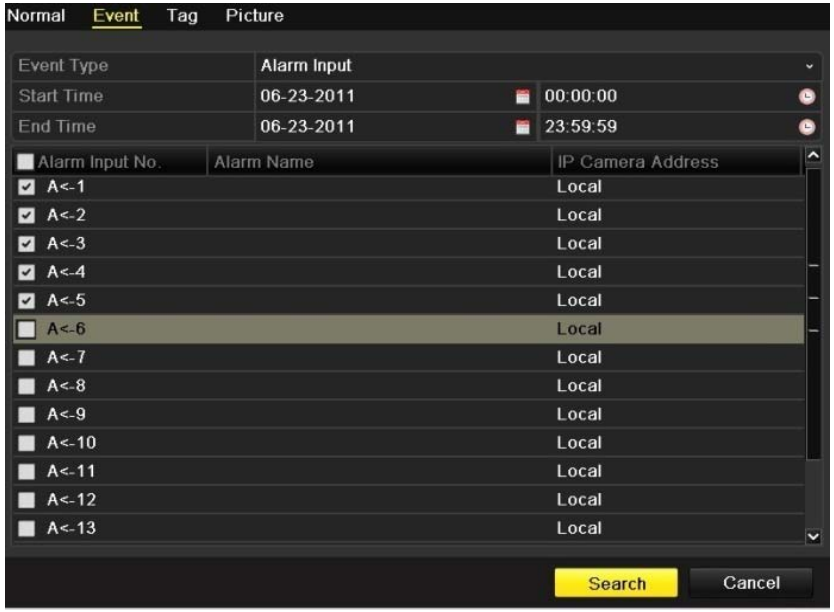


Figure 7.15 Video Search by Alarm Input

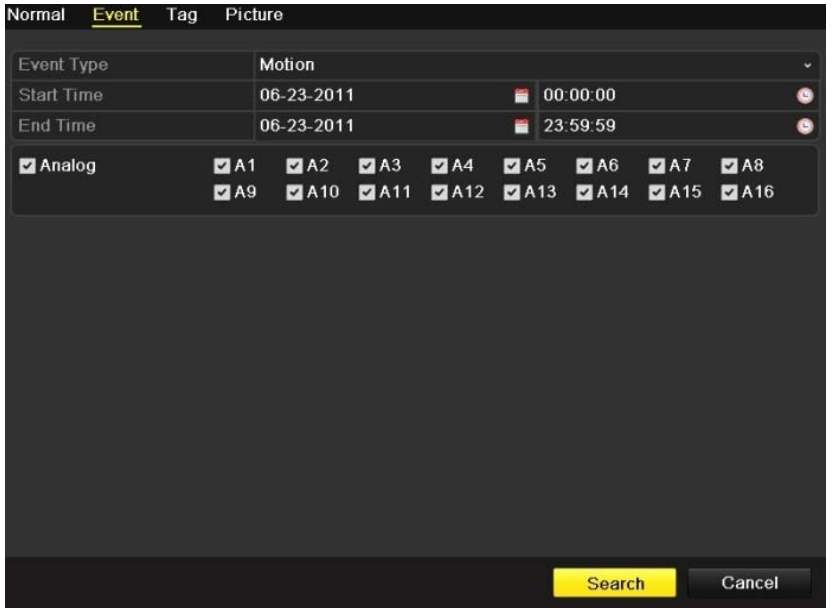


Figure 7.16 Video Search by Motion

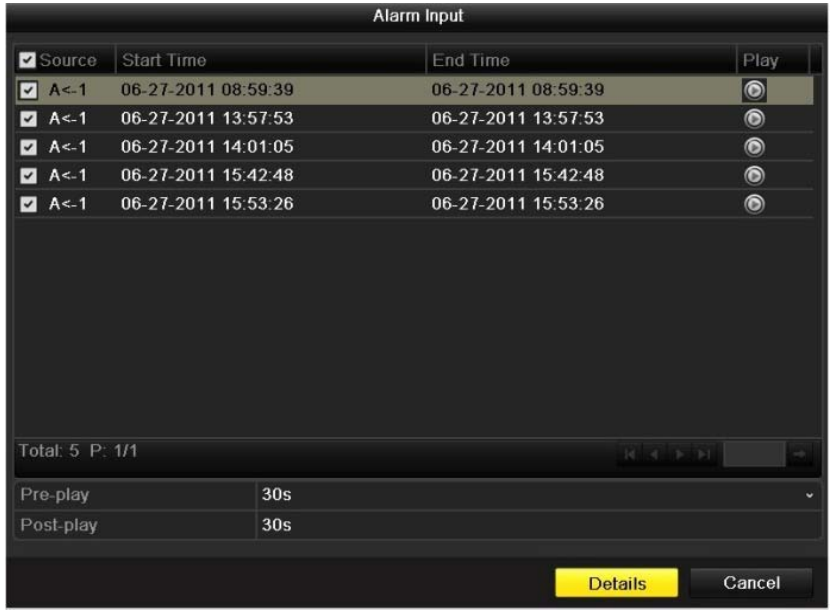


Figure7.17 Result of Video Search by Alarm Input

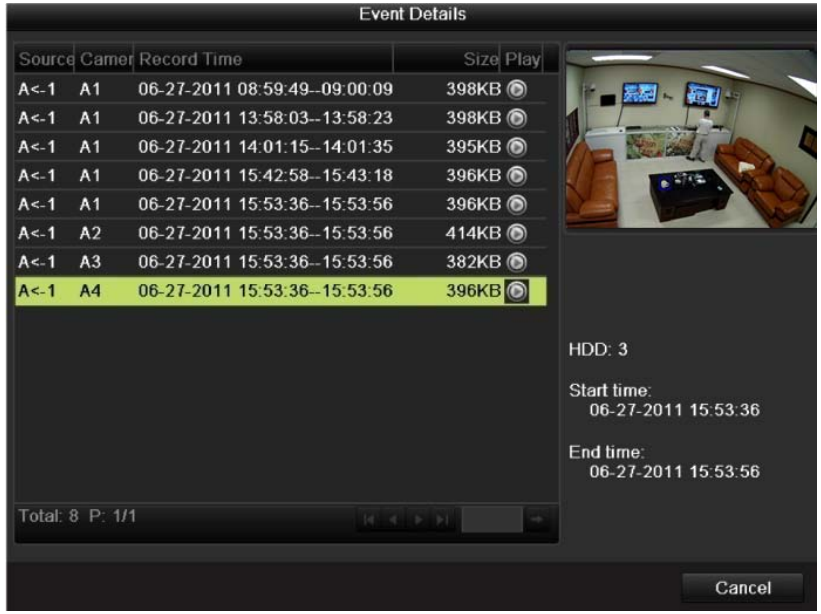


Figure 7.18 Event Details Interface

6. Click **Details** button to view detailed information of the record file, e.g. start time, end time, file size, etc.

7. Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 7.19 Interface of Playback by Event

Figure 7.20 Playback Interface with Alarm Input List

The hidden list of events will be displayed by moving the mouse to the right of the playback interface.

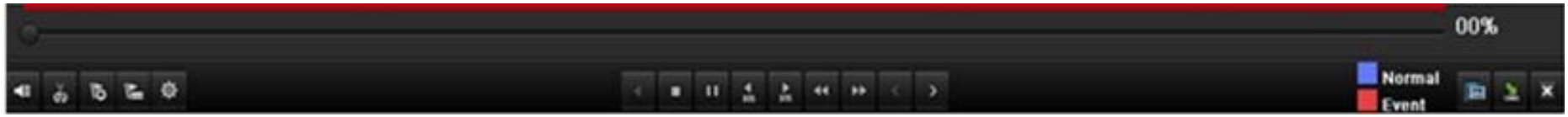


Figure 7.21 Toolbar of Playback by Event

Table 7.4 Detailed Explanation of Playback-by-event Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation

/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Speed down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Previous event		Next event		Event search		Exit
	Hide		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion, alarm, motion | alarm, motion & alarm).

7.1.5 Playing Back by Tag

Video tag allows you to record related information like people and location of a certain time point during playback. You are also allowed to use video tag(s) to search for record files and position time point.

Enter Playback interface.

Press button to add default tag.

Press button to add customized tag and input tag name.

Note: Max. 64 tags can be added to a single video file.

Tag management.

Press button to check, edit and delete tag(s). ***Steps:***

1. Enter Playback interface. Menu->Playback. Press **Tag** tab to enter Playback by Tag interface. Choose channels, tag type and time, and press Search to enter Search Result interface.

Note: Two tag types are selectable: *All* and *Tag Keyword*. Input keyword if you choose *Tag Keyword*.

Figure 7.22 Interface of Playback by Time

Figure 7.23 Tag Management Interface

2. Set playback conditions and tag management.

Choose the tag name of the recorded file you want to play back; it can be edited or deleted. Pre-play and post-play time can be set according to actual needs.
Note: Pre-play time and post-play time is added to the time point of the tag.

3. Playback by tag.

Choose a tag and press button to play back the related record file.

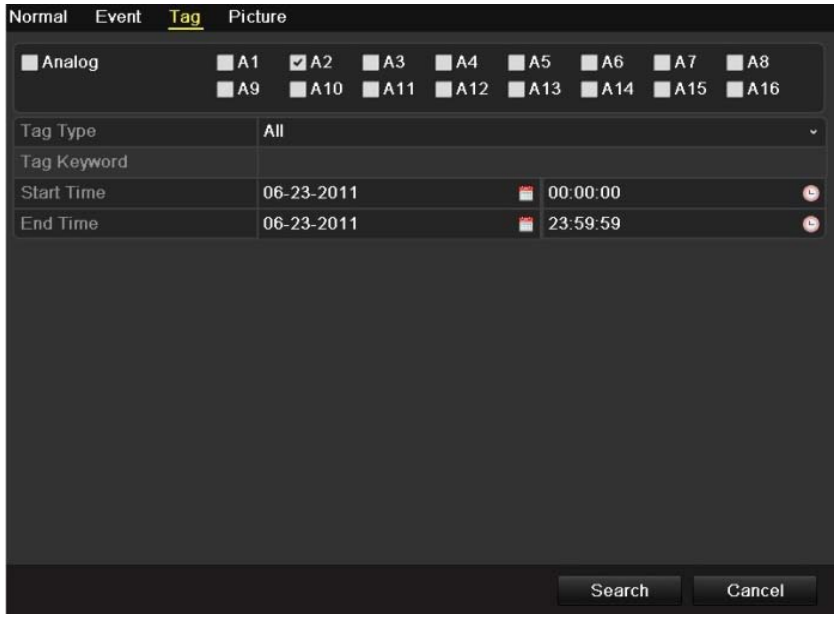


Figure 6.24 Video Search by Tag

Figure 6.25 Result of Video Search by Tag

Figure 7.26 Interface of Playback by Tag

Figure 7.27 Interface of Playback by Tag with Video List

The hidden list of tags will be displayed by moving the mouse to the right of the playback interface.

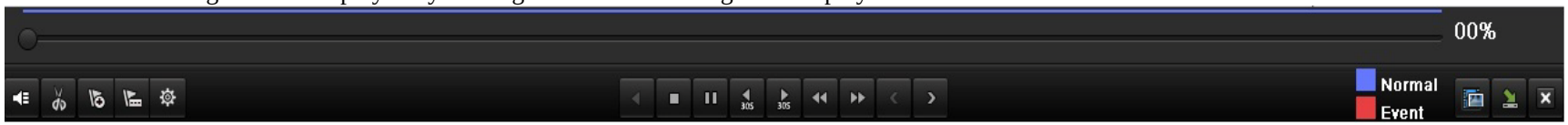


Figure 7.28 Toolbar of Playback by Tag

Table 7.5 Detailed Explanation of Playback-by-tag Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Previous tag		Next tag		Tag search		Exit
	Hide		Progress bar		Video type bar		

Note:
1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

7.1.6 Playing Back by System Log

Play back record file(s) associated with channels after searching system logs. ***Steps:***

1. Enter Log Search interface. Menu>Maintenance>Log Search. Set search time and type and press Search button.
2. Choose a log with record file and press button to enter Playback interface. If there is no record file at the time point of the log, the message box “no related record file” will pop up.
3. Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

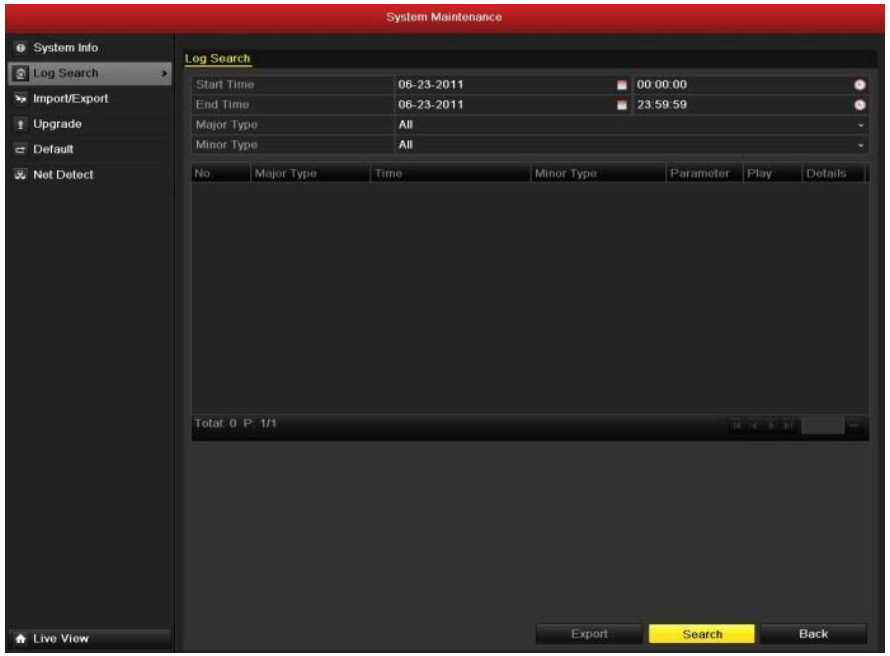


Figure 7.29 System Log Search Interface

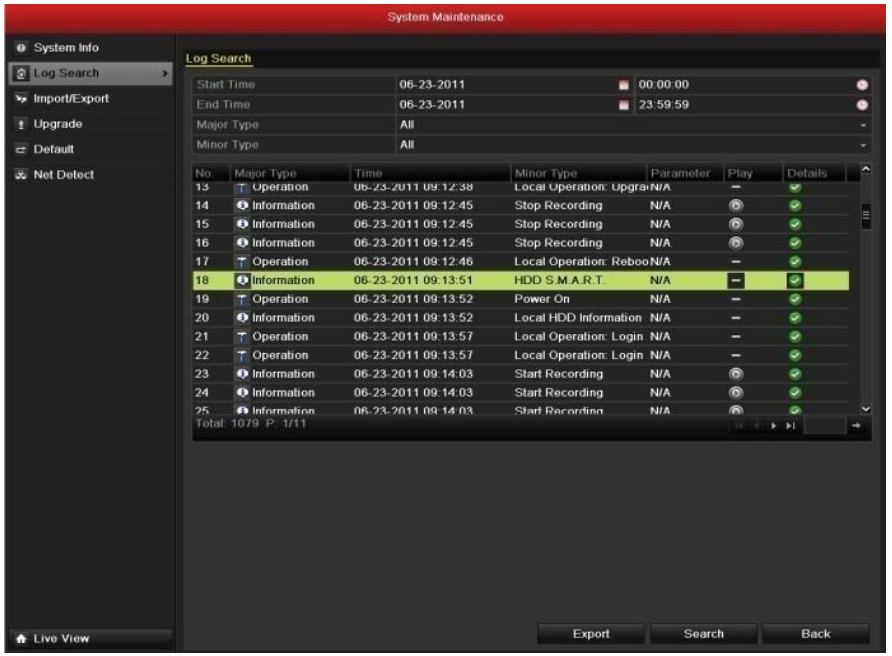

System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Log Search
Start Time 06-23-2011 00:00:00
End Time 06-23-2011 23:59:59
Major Type All
Minor Type All
No. Major Type Time Minor Type Parameter Play Details
14 Information 06-23-2011 09:12:45 Stop Recording N/A
15 Information 06-23-2011 09:12:45 Stop Recording N/A
16 Information 06-23-2011 09:12:45 Stop Recording N/A
17 Operation 06-23-2011 09:12:46 Local Operation: Reboo N/A
18 Information 06-23-2011 09:13:51 HDD S.M.A.R.T. N/A
19 Operation 06-23-2011 09:13:52 Power On N/A
20 Information 06-23-2011 09:13:52 Local HDD Information N/A
21 Operation 06-23-2011 09:13:57 Local Operation: Login N/A
22 Operation 06-23-2011 09:13:57 Local Operation: Login N/A
23 Information 06-23-2011 09:14:03 Start Recording N/A
24 Information 06-23-2011 09:14:03 Start Recording N/A
Total: 1079 P: 1/11
Live View
Export
Search
Back

Figure 7.29 Result of System Log Search

Figure 7.30 Interface of Playback by Log

7.2 Auxiliary Functions of Playback

7.2.1 Playing Back Frame by Frame

Play video files frame by frame, in order to check image details of the video when abnormal events happen. ***Steps:***

- **Using a Mouse:**

Go to Playback interface and click button and until the speed changes to *Single* frame. One click on the playback screen represents playback or adverse playback of one frame. It is also feasible to use button in toolbar.

- **Using the Front Panel:**

Rotate the inner control on Jog Shuttle counterclockwise or press the ▼ button to set the speed to *Single* frame. One click on button represents playback or adverse playback of one frame.

7.2.2 Smart Search

In order to locate motion detection event easily and accurately in the playback progress bar, you are allowed to analyze a certain area (scene) dynamically, and to get all of the related motion detection events that occurred in this area. ***Steps:***

1. Go to Playback interface and play the video.

Figure 7.31 Interface of Playback by Time

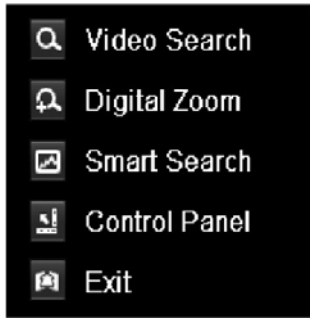


Figure 7.32 Right-click Menu under Playback

2. Right-click mouse and select Smart Search to go to analysis area selection interface.

3. You can press button to set the full screen as target searching area. After drawing area(s), press button to execute smart search in this area.

Note: Multi-area and full-screen searching modes are supported.

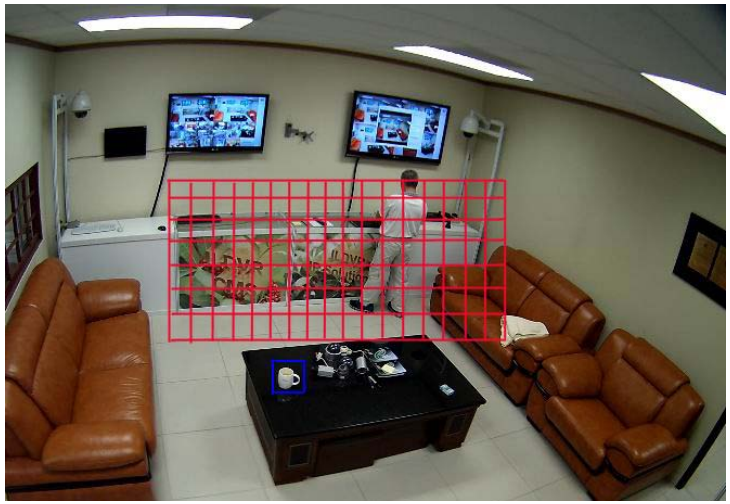


Figure 7.33 Draw Area of Smart Search

Figure 7.34 Smart Search Result with Video List

Results of intelligent analysis: Video type bar:

: Normal record file;

: Event record file;

: Dynamic record file.

The hidden list of record files display when moving the mouse to the right of the playback interface.

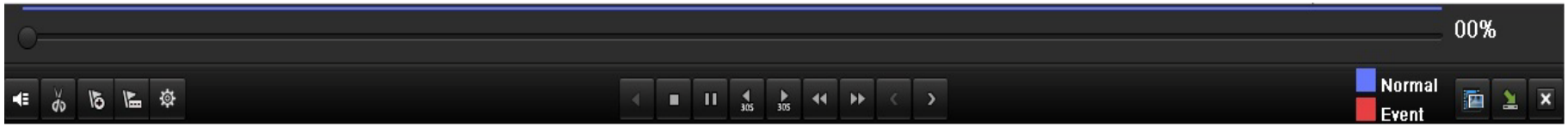


Figure 7.35 Toolbar of Smart Search Playback

Table 6.6 Detailed Explanation of Smart-search-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
/	Audio on/Mute	/	Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow down
/	Pause reverse play/Reverse play/ Single-frame reverse play	/	Pause playing/Play/Single-frame play		Stop		Speed up
	Previous smart search result		Next smart search result		Video search		Exit
	Hide		Progress bar		Video type bar		Smart search bar

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.

2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion, alarm, motion | alarm, motion & alarm).

7.2.3 Digital Zoom

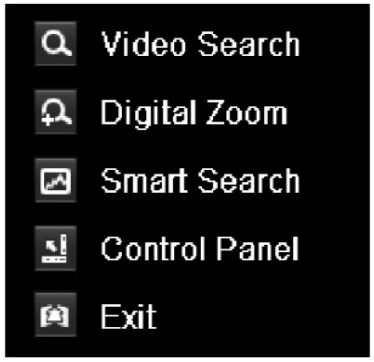
Steps:

1. Right click the mouse on a channel under playback and choose Digital Zoom to enter Digital Zoom interface.

2. Move the red rectangle and the image within it will be quadrupled.

The right-click menu: This menu differs slightly from one playback interface to another.

Figure 6.36 Draw Area for Digital Zoom



Button	Function
	Return to Search interface
	Enter Digital Zoom interface
	Motion Analysis against a specified
	Show & hide control interface
	Return to Playback interface

Figure 7.37 Right-click Menu under Playback

7.3 Picture Playback

Search and view captured pictures stored in HDD. ***Steps:***

1. Enter Playback interface. Menu>Playback
2. Choose **Picture** tab.

   Set channel, picture type and time and press **Search** button to enter Search Result interface.

Note: Picture types include Normal, Motion, Alarm, Motion / Alarm, Motion & Alarm, Capture and Continuous Capture.

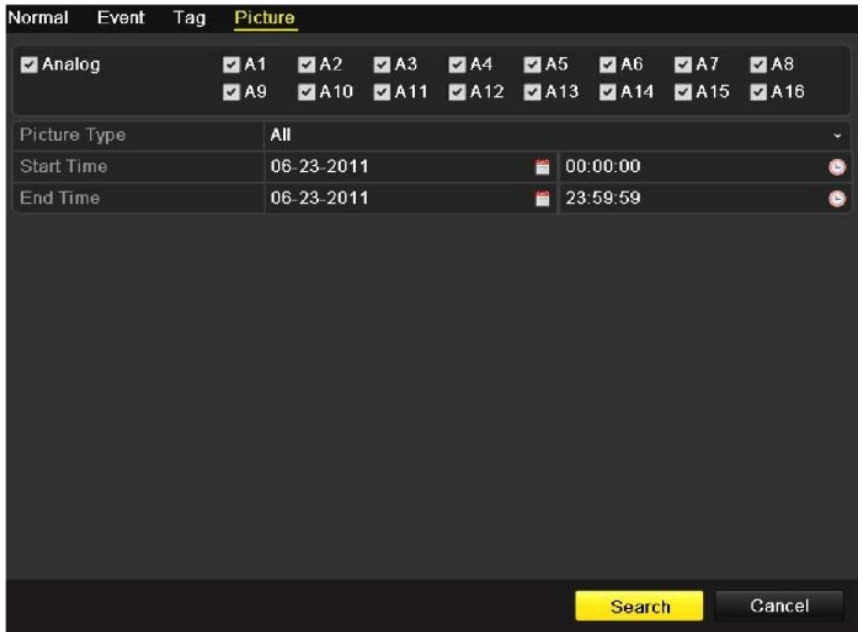


Figure 7.38 Picture Search

Figure 7.39 Result of Picture Search

3. View pictures.

   Choose a picture you want to view and press button .

4. Picture Playback interface.

   The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 7.40 Picture Playback Interface

Figure 7.42 Picture Playback Toolbar

The hidden list of captured pictures will be displayed by moving the mouse to the right of the playback interface.

Figure 7.41 Playback Interface with Picture List

Button	Function	Button	Function	Button	Function	Button	Function
	Play reverse		Play		Previous picture		Next picture
	Picture search		Hide		Exit		

8 Backup

8.1 Backing up Record Files

8.1.1 Quick Export

Export record files to backup device(s) quickly. ***Steps:***

1. Enter Video Export interface.

Choose the channel(s) you want to back up and press **Quick Export** button.

Note:

- The time duration of record files on a specified channel cannot exceed one day. Otherwise, the message box “Max. 24 hours are allowed for quick export.” will pop up.
- The number of channels for synchronous export cannot exceed 4. Otherwise, the message box “Max. 4 channels are allowed for synchronous quick export.” will pop up.

2. Export.

Go to Export interface, choose backup device and press **Export** button to start exporting. Here we use USB Flash Drive and please refer to the next section Normal Backup for more backup devices supported by the device. Stay in the Exporting interface until all record files are exported.

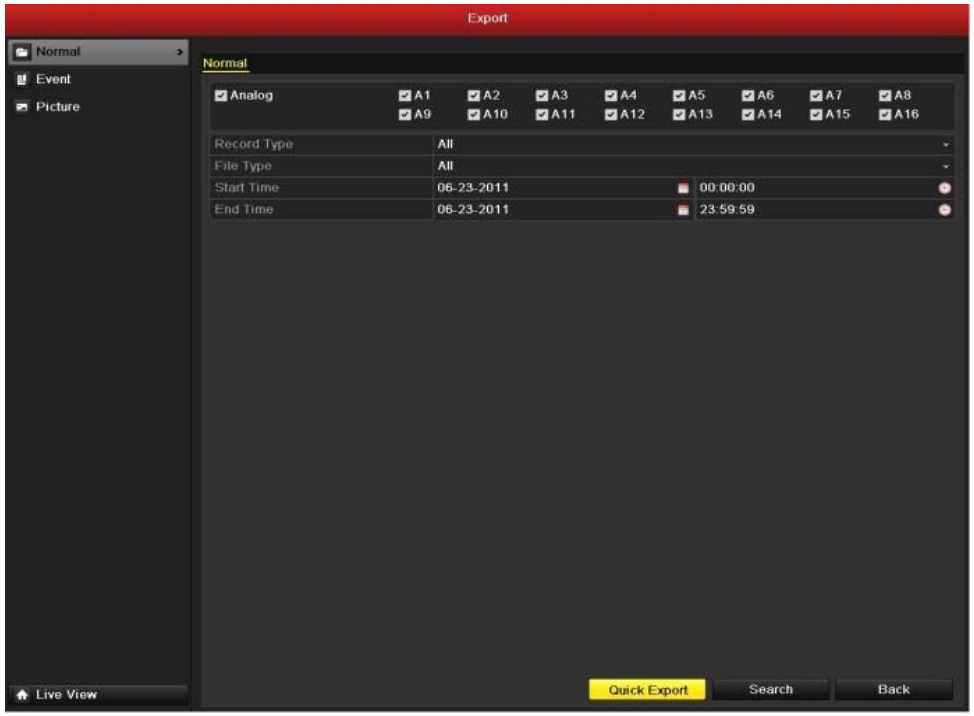


Figure 8.1 Quick Export Interface

Figure 8.2 Quick Export using USB1-1

3. Check backup result.

Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

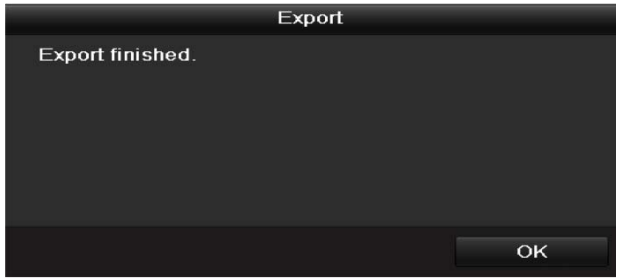


Figure 8.3 Export Finished

Figure 8.4 Checkup of Quick Export Result Using USB1-1

8.1.2 Backing up by Normal Video Search

The record files can be backup to various devices, such as USB devices (USB flash drives, USB HDDs, USB writer), SATA writer and e-SATA HDD.

Backup using USB flash drives and USB HDDs

Steps:

1. Enter Export interface. Menu>Export>Normal
2. Set search condition and press **Search** button to enter the search result interface.
3. Select record files you want to back up. Press button to play the record file if you want to check it. Check the checkbox before the record files you want to back up. The size of the currently selected files is displayed in the lower-left corner of the window.
4. Export.
   Click **Export** button and start backup. If the inserted USB device is not recognized:
   - Click the **Refresh** button.
   - Reconnect device.
   - Check for compatibility from vendor.

   You can also format USB flash drives or USB HDDs via the device. Stay in the Exporting interface until all record files are exported with pop-up message box "Export finished".
5. Check backup result. Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

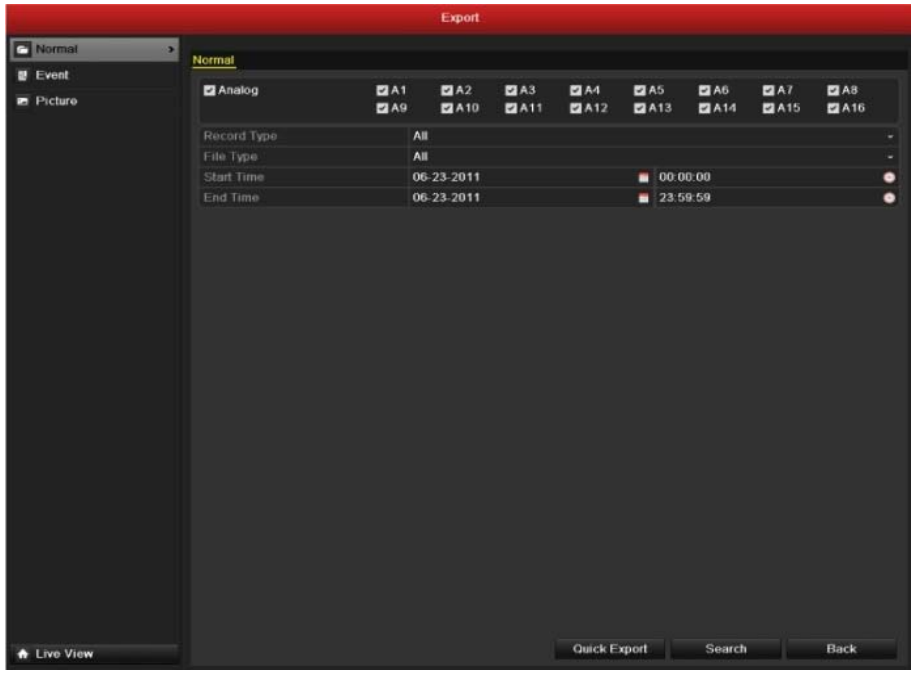


Figure 8.5 Normal Video Search for Backup

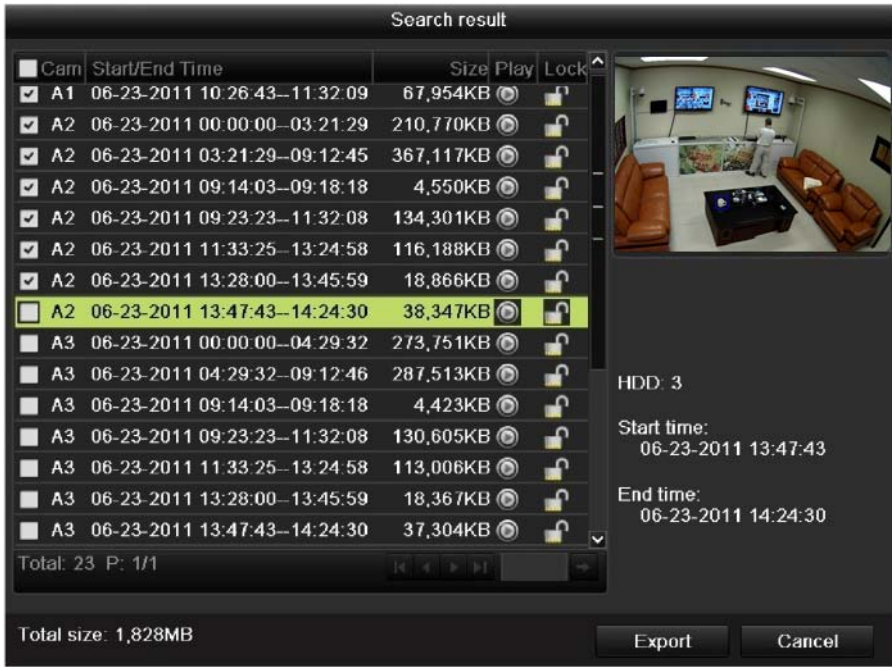


Figure 8.6 Result of Normal Video Search for Backup

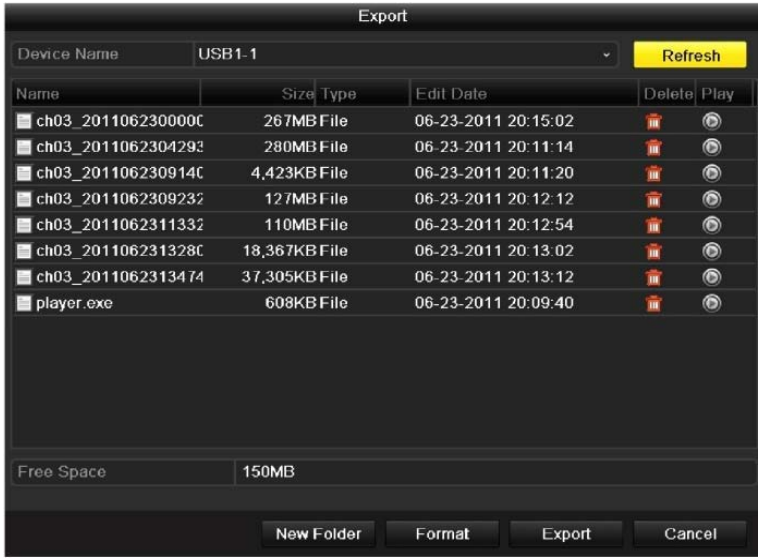


Figure 8.7 Export by Normal Video Search using USB Flash Drive

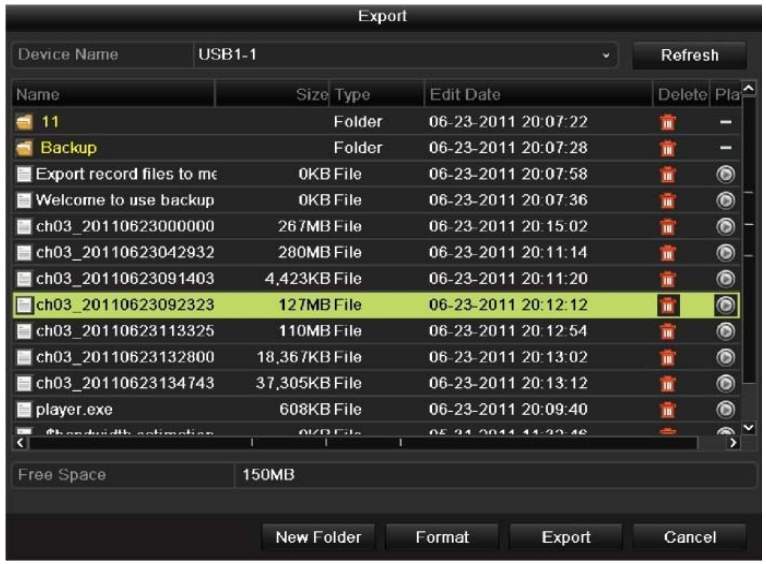


Figure 8.9 Checkup of Export Result using USB Flash Drive

Backup using USB writer and SATA writer

Steps:

1. Enter Export interface. Menu>Export>Normal
2. Set search condition and press Search button to enter the search result interface.
3. Select record files you want to back up. Press button to play the record file if you want to check it. Check the checkbox before the record files you want to back up. The size of the currently selected files is displayed in the lower-left corner of the window.
4. Export. Click **Export** button and start backup. If the inserted USB writer or SATA writer is not recognized:

   • Click the **Refresh** button.

   • Reconnect device.

   • Check for compatibility from vendor.

   Stay in the Exporting interface until all record files are exported with pop-up message box “Export finished”.
5. Check backup result. Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

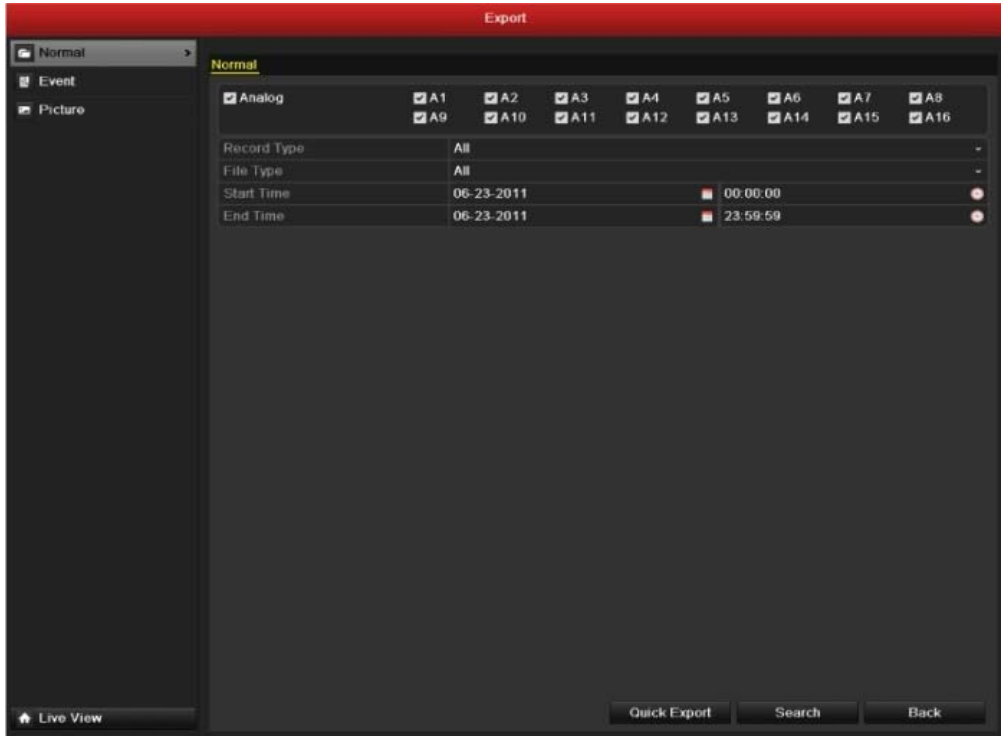


Figure 8.10 Normal Video Search for Backup

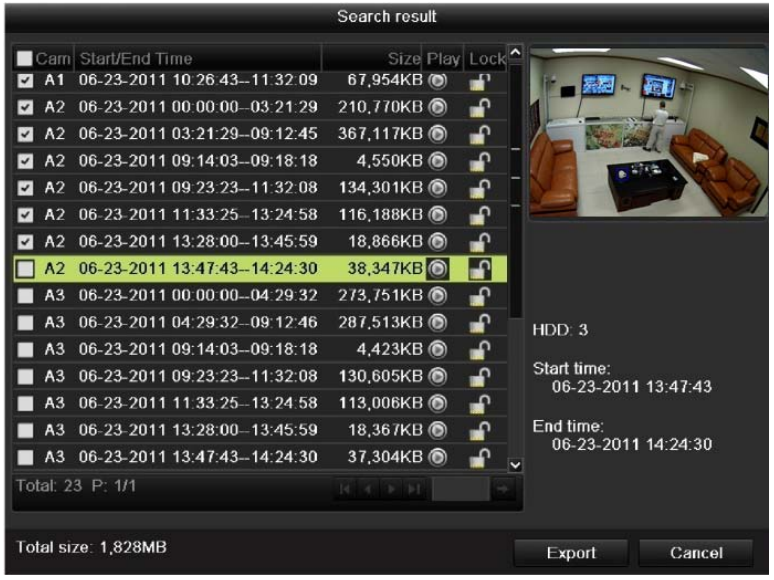


Figure 8.11 Result of Normal Video Search for Backup

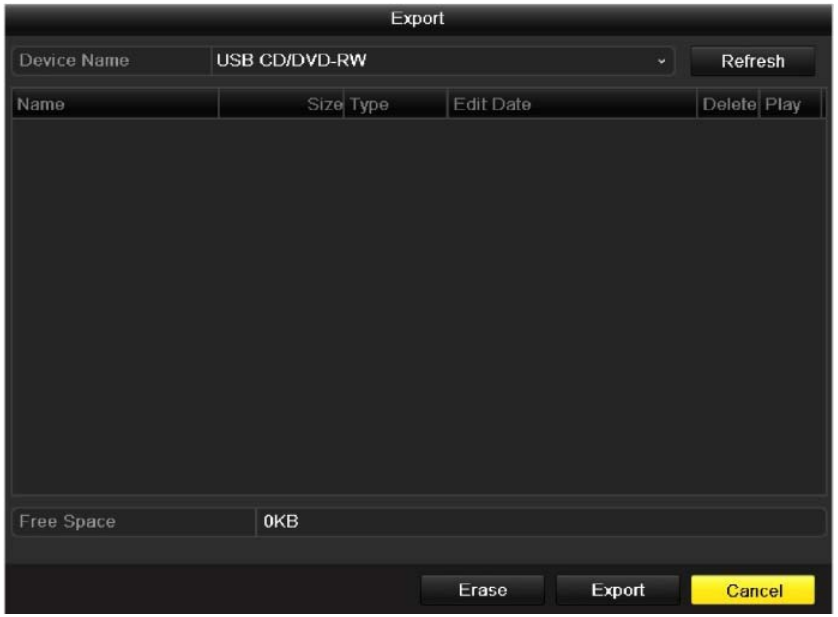


Figure 8.12 Export by Normal Video Search using USB Writer

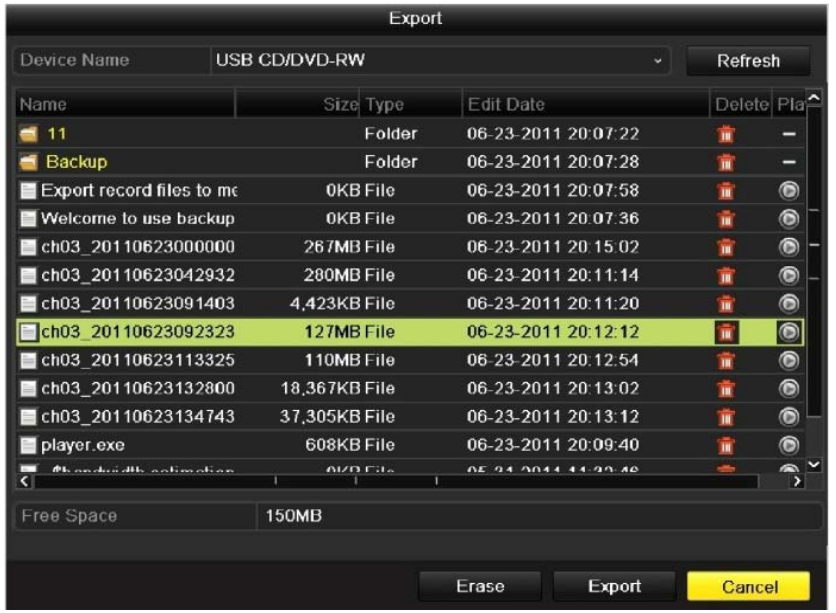


Figure 8.14 Checkup of Export Result using USB Writer

Backup using eSATA HDDs

Steps:

1. Enter Record>Advanced and set the working mode of eSATA HDD at “Export”. Menu>Record>Advanced. Choose eSATA and set its mode at Export. Click **Yes** when pop-up message box “System will reboot automatically if the usage of eSATA is changed. Continue?” The working modes of eSATA HDD contain Record/Capture and Export. And changes in working mode will take effective after rebooting the device.
2. Enter Export interface. Menu>Export>Normal. Set search condition and press **Search** button to enter the search result interface.
3. Select record files you want to back up. Press button to play the record file if you want to check it. Tick record files you want to back up. The size of the currently selected files is displayed in the lower-left corner of the window.
4. Export. Press **Export** button and start backup. Please format the eSATA first when using it for the first time. If the inserted eSATA HDD is not recognized:
   • Click the **Refresh** button.
   • Reconnect device.
   • Check for compatibility from vendor.
   You can also format SATA HDD via the device. Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.
5. Check backup result. Choose the record file in Export interface and press button to check it.

Note: The Player player.exe will be exported automatically during record file export.

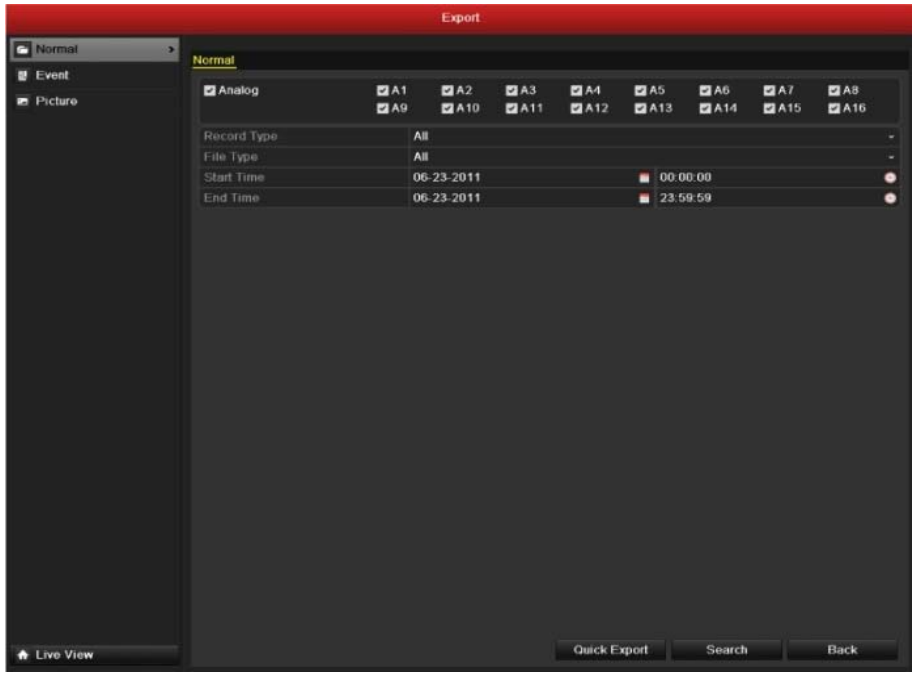


Figure 8.15 Normal Video Search for Backup

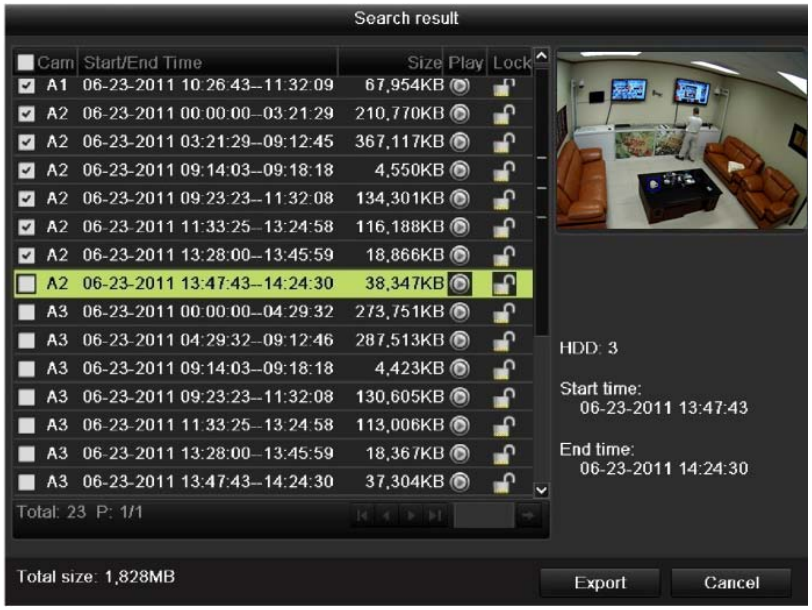


Figure 8.16 Result of Normal Video Search for Backup

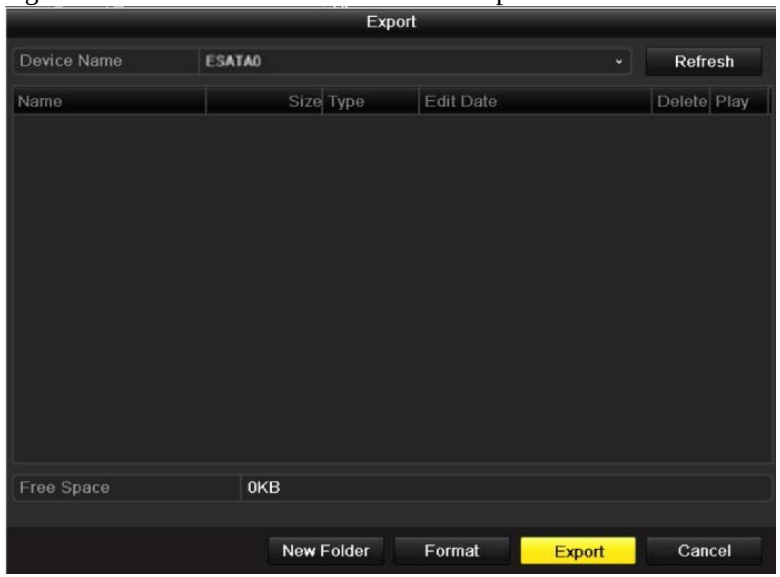


Figure 8.17 Export by Normal Video Search Using eSATA HDD

Figure 8.19 Checkup of Export Result Using eSATA HDD

8.1.3 Backing up by Event Search

Back up event-related record files using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or e-SATA HDD. Quick Backup and Normal Backup are supported.

Steps:

1. Enter Export interface. Menu>Export>Event

1) Select “Alarm Input” from the dropdown list of Event Type.
2) Select the alarm input No. and time.
3) Press **Search** button to enter the Search Result interface.

Figure 8.20 Event Search for Backup

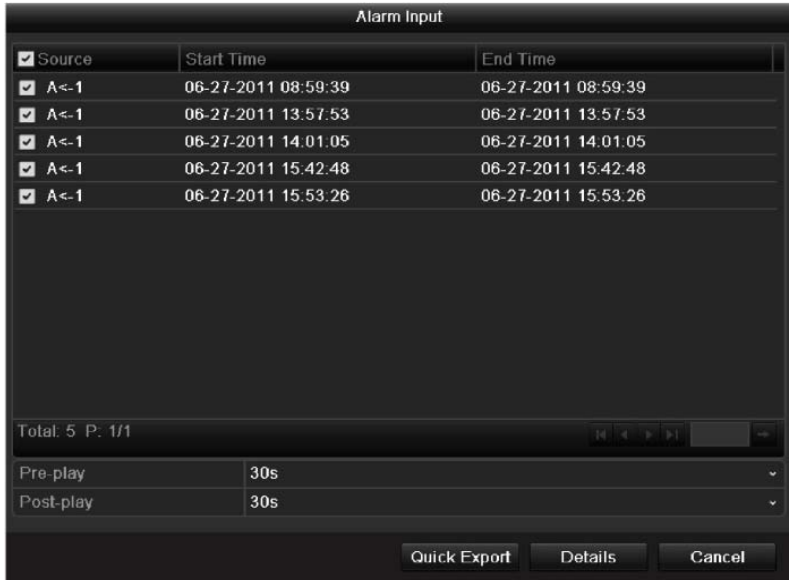


Figure 8.21 Result of Event Search

2. Select record files to export.

1) Select an alarm input in the list and press **Quick Export** button to enter Export interface.
2) Pressing **Details** button will take you to the interface with detailed information of all channels triggered by the selected alarm input.

Note: Event types contain Alarm Input and Motion.

3) Pressing **Quick Export** button will export record files of all channels triggered by the selected alarm input.

4) Click Details button to view detailed information of the record file, e.g. start time, end time, file size, etc.
Note: The size of the currently selected files is displayed in the lower-left corner of the window.

3. Export. Click the **Export** button and start Backup. If the inserted USB device is not recognized:

- Click the Refresh button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drive or USB HDDs via the device.

Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

4. Check backup result.

Note: The Player player.exe will be exported automatically during record file export.

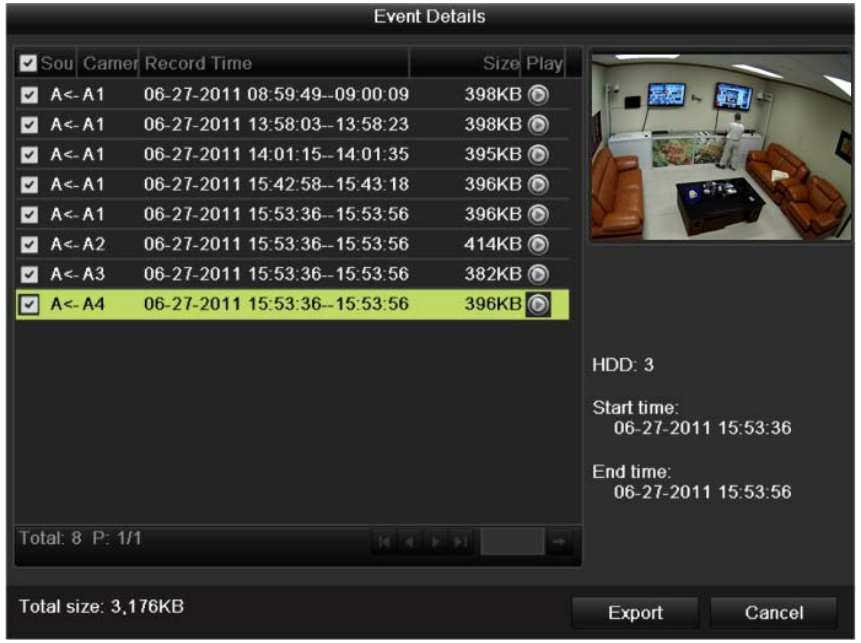


Figure 8.22 Event Details Interface

Figure 8.23 Export by Event Using USB Flash Drive

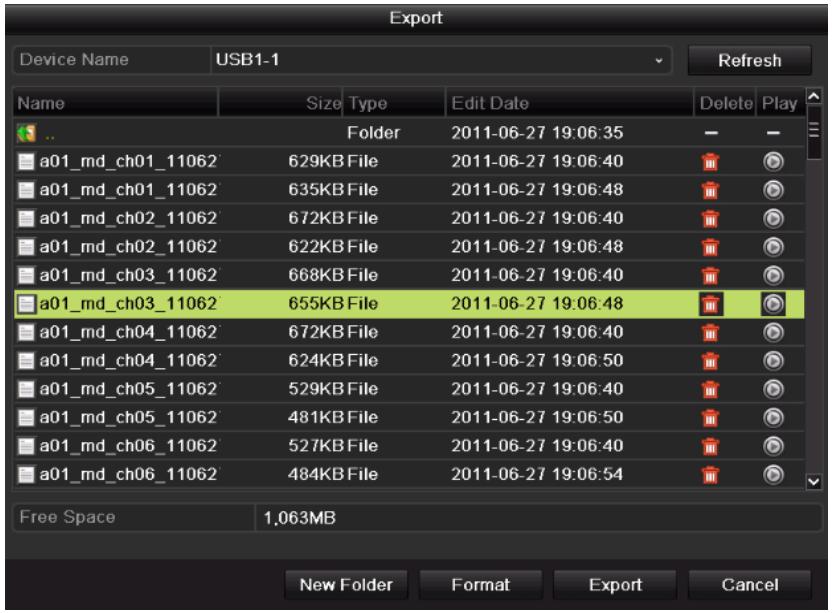


Figure 8.25 Checkup of Event Export Result Using USB Flash Drive

8.1.4 Backing up Video Clips

You may also select video clips to export directly during Playback, using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or e-SATA HDD.

Steps:

1. Enter Playback interface. Please refer to Section *7*.
2. During playback, use buttons and in the playback toolbar to start or stop clipping record file(s).
3. Quit Playback interface after finishing clipping and you will then be prompted to save the clips.
   Note: A maximum of 30 clips can be selected for each channel.
4. Click **Yes** to save video clips and enter Export interface, or click **No** to quit and do not save video clips.

Figure 7.27 Attention to Video Clip Saving

5. Export. Press **Export** button and start backup. If the inserted USB device is not recognized:

• Click the **Refresh** button.

• Reconnect device.

• Check for compatibility from vendor.

You can also format USB flash drive or USB HDDs via the device.

Stay in the Exporting interface until all record files are exported with pop-up message “Export Figure 8.29 Export Finished pop-up message “Export

6. Check backup result.

Note: The Player player.exe will be exported automatically during record file export.

Figure 8.28 Export Video Clips Using USB Flash Drive

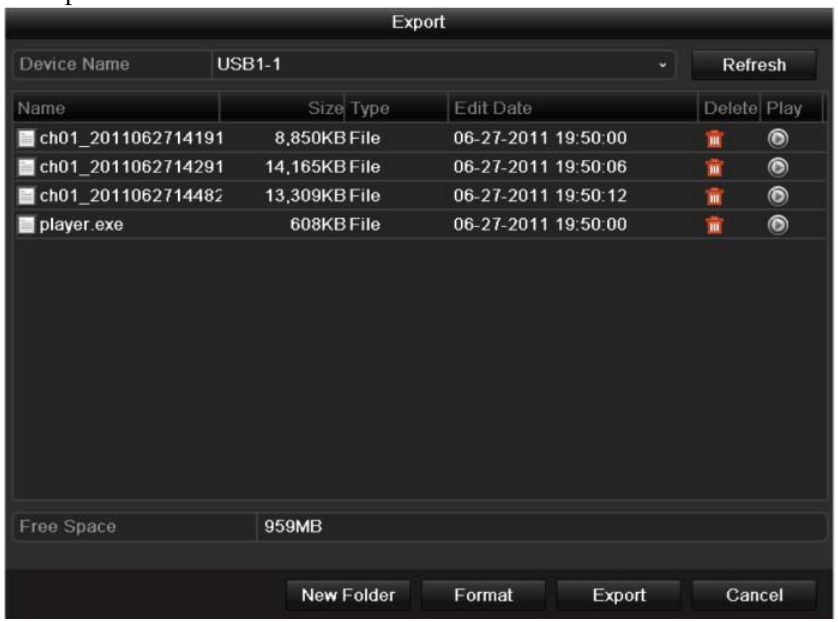


Figure 8.30 Checkup of Video Clips Export Result Using USB Flash Drive

8.2 Backing up Pictures

Back up pictures using USB devices (USB flash drives, USB HDDs, USB writer), SATA writer or e-SATA HDD. ***Steps:***

1. Enter Export interface. Menu>Export>Picture. Select channel(s), image type, start time and end time, and click **Search** button to enter the Search Result interface.

2. Select pictures you want to back up. Check the checkbox before the pictures you want to back up and click **Export** button.

Note: Here we take USB flash drive as an example. For more backup devices, please refer to section Playing Back by Normal Video Search.

3. Export. Press **Export** button and start backup. Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

4. Check backup result.

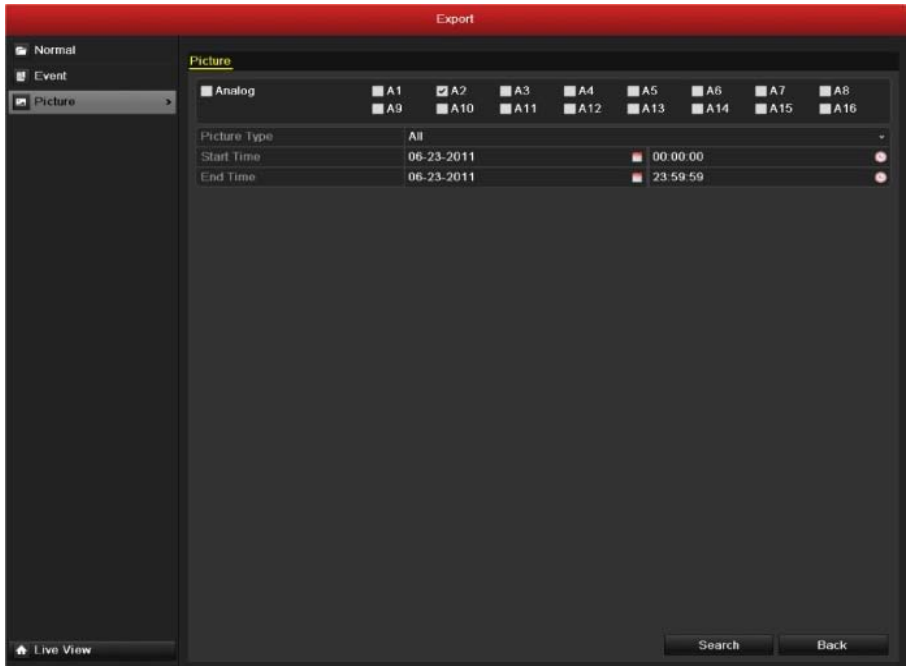


Figure 8.31 Picture Search for Backup

Figure 8.32 Result of Picture Search

Figure 8.33 Export Pictures Using USB Flash Drive

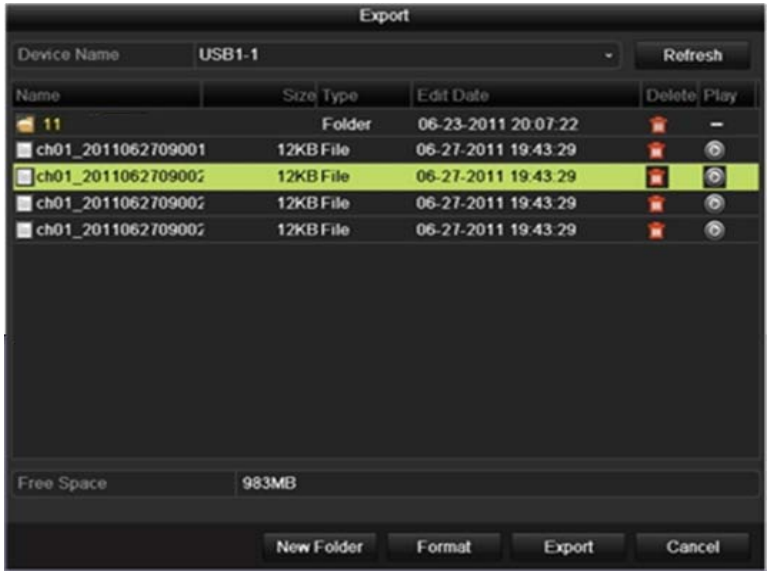


Figure 8.35 Checkup of Picture Export Using USB Flash Drive

8.3 Managing Backup Devices

8.3.1 Management of USB flash drives, USB HDDs and eSATA HDDs.

1. Enter Search Result interface of record files. Menu>Export>Normal. Set search condition and press **Search** button to enter Search Result interface. At least one channel shall be selected.
2. Select record files you want to back up. Press **Export** button to enter Export interface. At least one record file shall be selected.
3. Backup device management. Press **New Folder** button if you want to create a new folder in the backup device. Select a record file or folder in the backup device and press button if you want to delete it. Select a record file in the backup device and press button to play it. Press **Format** button to format the backup device. If the inserted USB device is not recognized:
   - Click the **Refresh** button.
   - Reconnect device.
   - Check for compatibility from vendor.

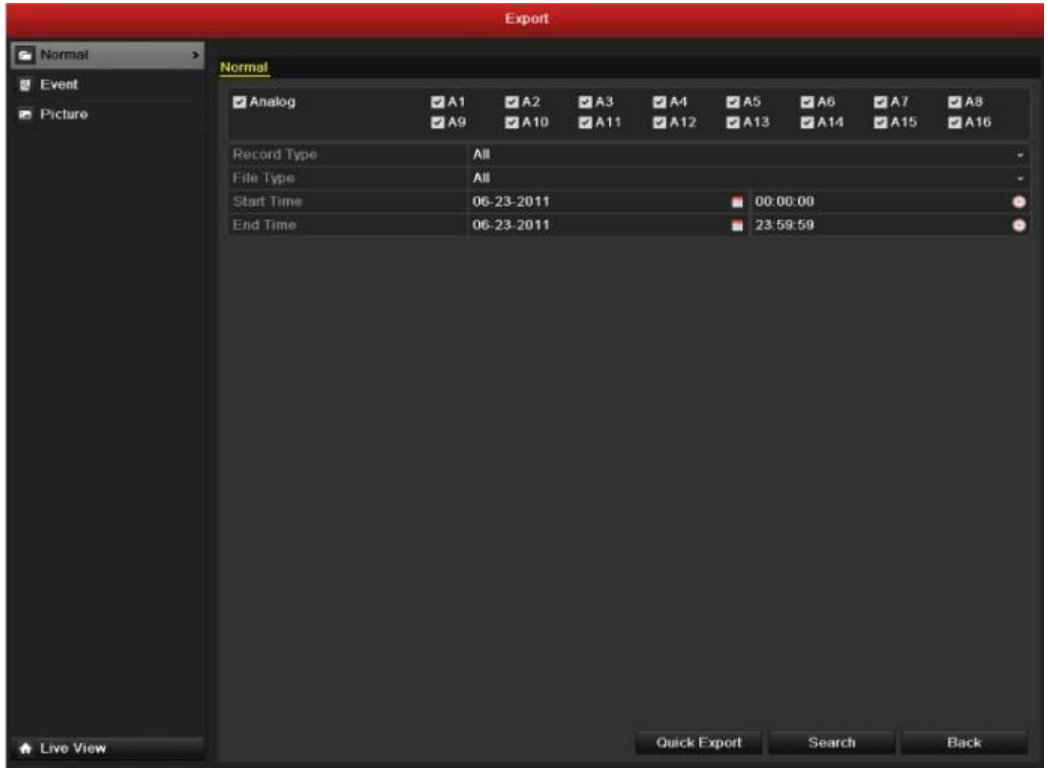


Figure 8.36 Normal Video Search for Backup

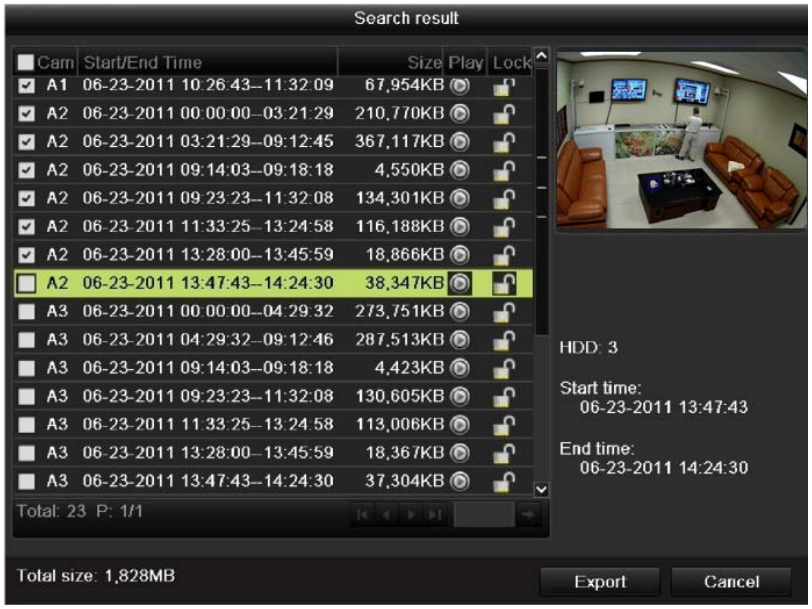


Figure 8.37 Result of Normal Video Search for Backup

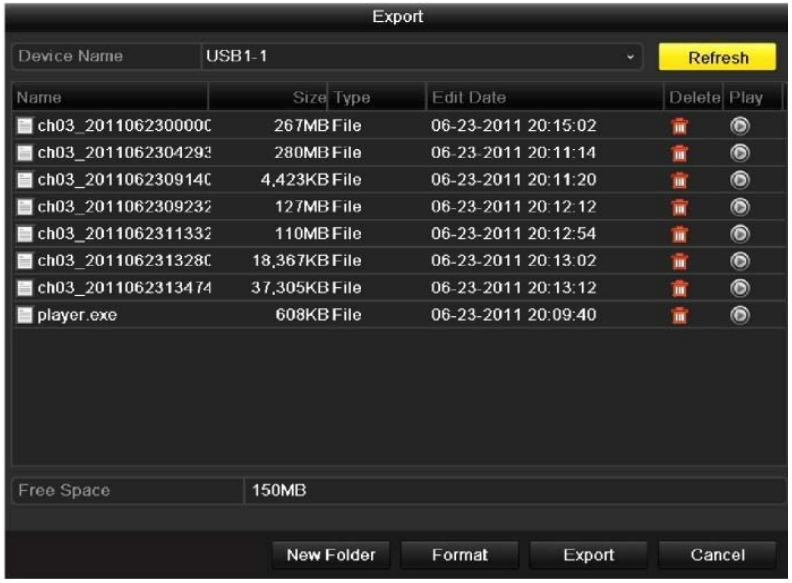


Figure 8.38 USB Flash Drive Management

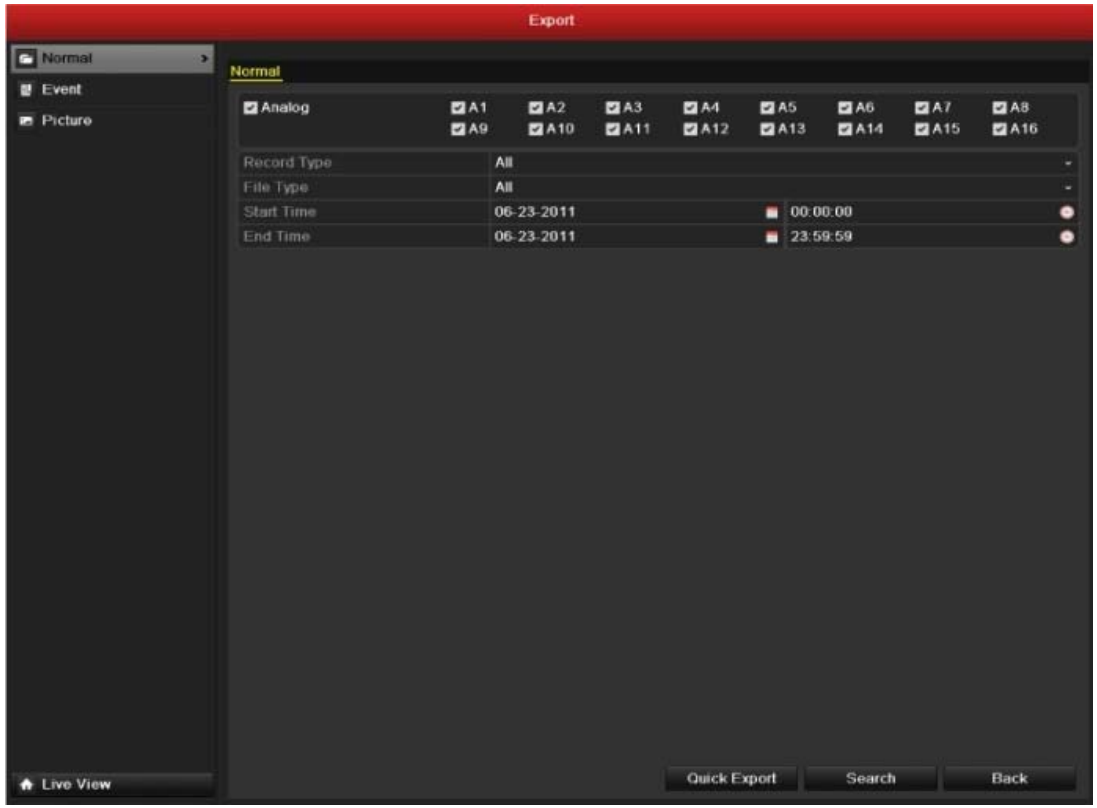


Figure 8.39 Normal Video Search for Backup

8.3.2 Management of USB writers and SATA writers

1. Enter Search Result interface of record files. Menu>Export>Normal. Set search condition and press **Search** button to enter Search Result interface. At least one channel shall be selected.
2. Select record files you want to back up. Press **Export** button to enter Export interface. At least one record file shall be selected.
3. Backup device management. Press **Erase** button if you want to erase the files from a re-writable CD/DVD. There must be a re-writable CD/DVD when you make this operation. If the inserted USB writer or SATA writer is not recognized:
   • Click the **Refresh** button.
   • Reconnect device.
   • Check for compatibility from vendor.

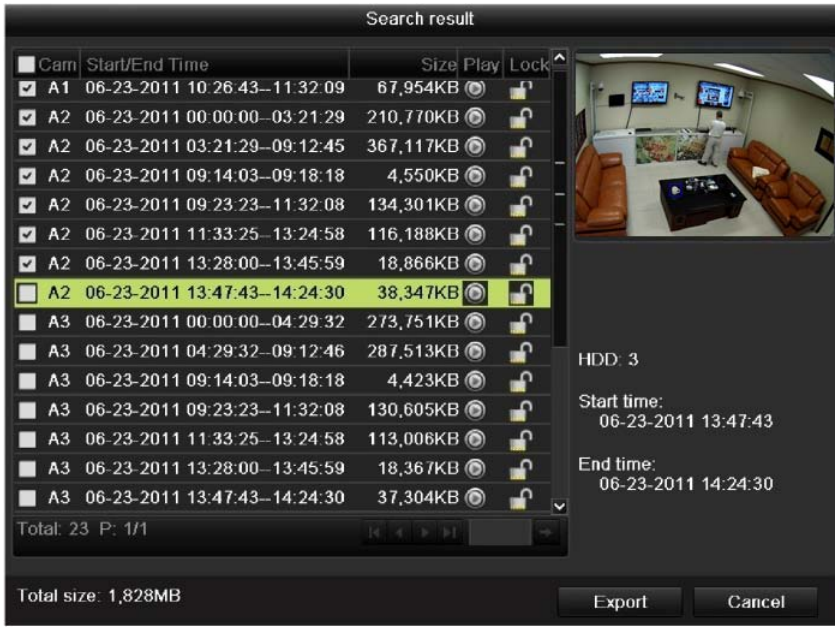


Figure 8. 40 Result of Normal Video Search for Backup

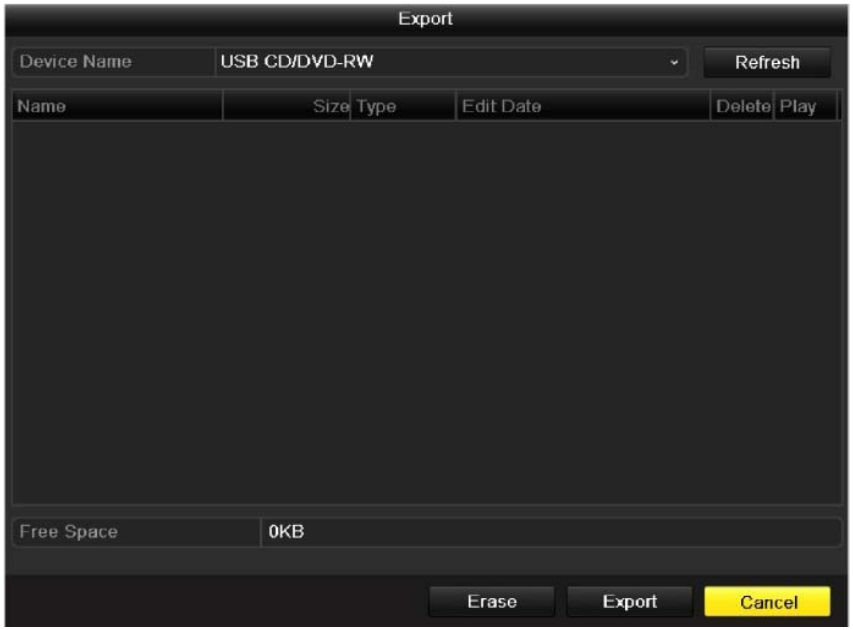


Figure 8.41 USB Writer Management

9 Alarm Setup

9.1 Setting up Motion Detection

Steps:

1. Enter Motion Detection interface of Camera Management and choose a camera you want to set up motion detection. Menu> Camera> Motion
2. Set up detection area and sensitivity. Tick “Enable Motion Detection”, use the mouse to draw detection area(s) and drag the sensitivity bar to set sensitivity. Press **Handling** button and set alarm response actions.
3. Click **Trigger Channel** tab and select one or more channels which will start to record/capture or become full-screen monitoring when motion alarm is triggered.
4. Set up arming schedule of the channel. Select Arming Schedule tab to set the channel’s arming schedule. Choose one day of a week and up to eight time periods can be set within each day. Time periods shall not be repeated or overlapped.
5. Click **Handling** tab to set up alarm response actions of motion alarm (please refer to Section *9.6*). Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days. Click the **OK** button to complete the motion detection settings of the channel.
6. If you want to set up motion detection for another channel, repeat the above steps or just copy the above settings to it. You are not allowed to copy the “Trigger Channel” action.

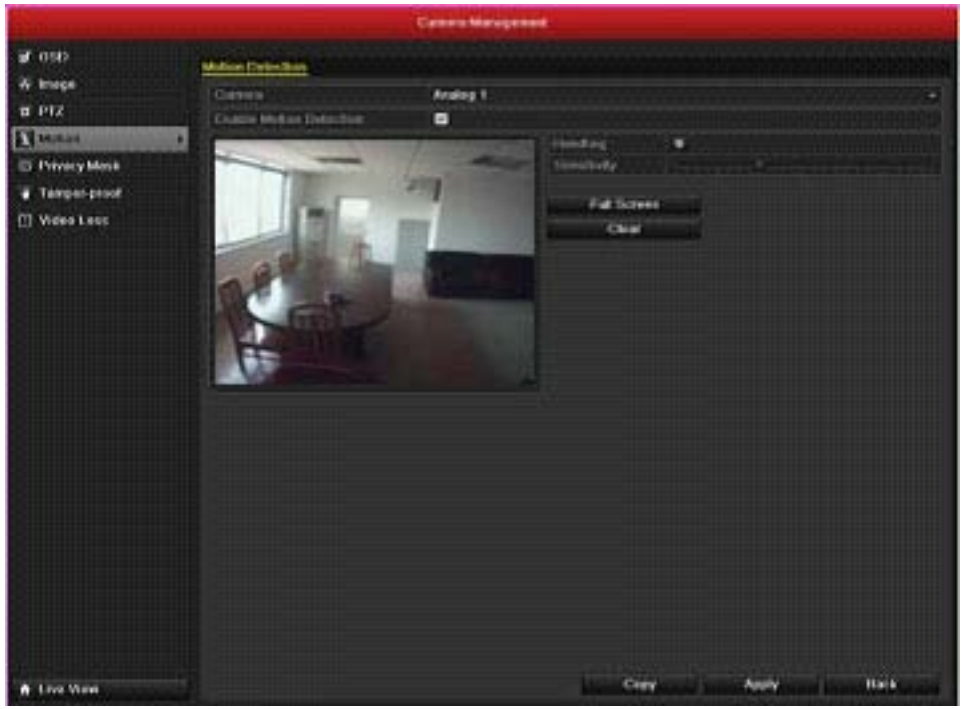


Figure 9.1 Motion Detection Setup Interface

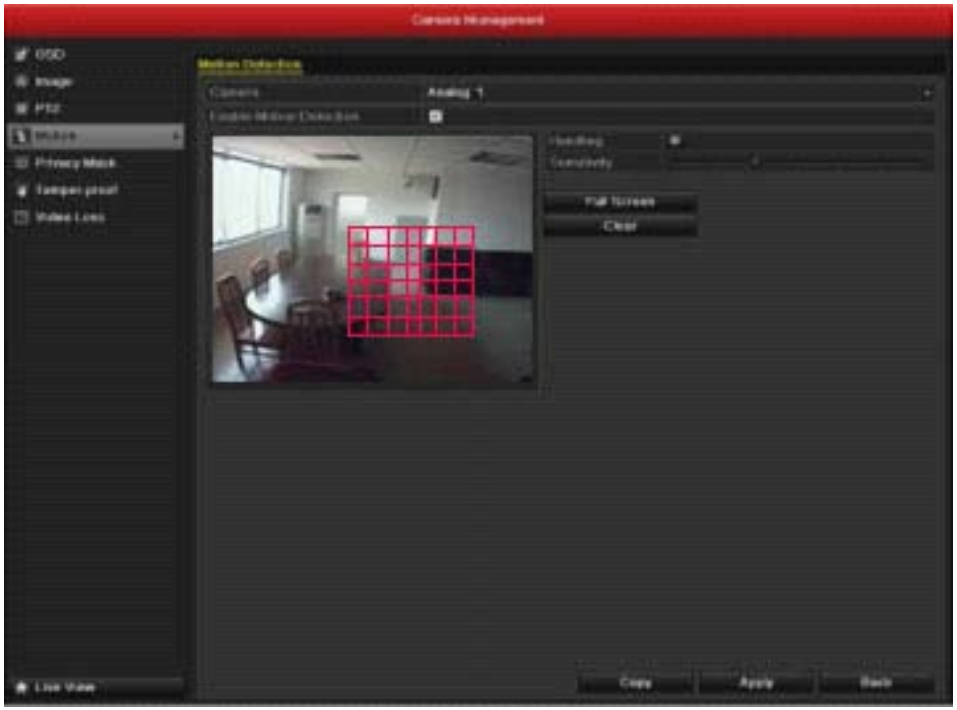


Figure 9.2 Set Detection Area and Sensitivity

Figure 9.3 Set Trigger Camera of Motion Detection

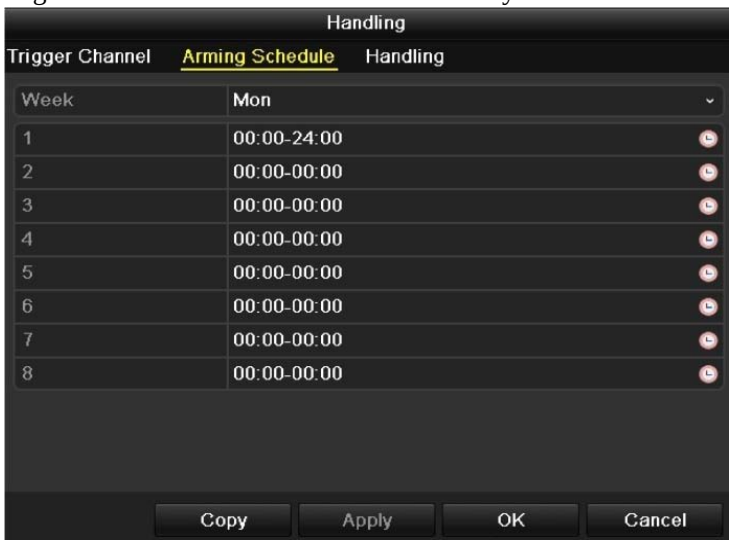


Figure 9.4 Set Arming Schedule of Motion Detection

Figure 9.5 Copy Settings of Motion Detection

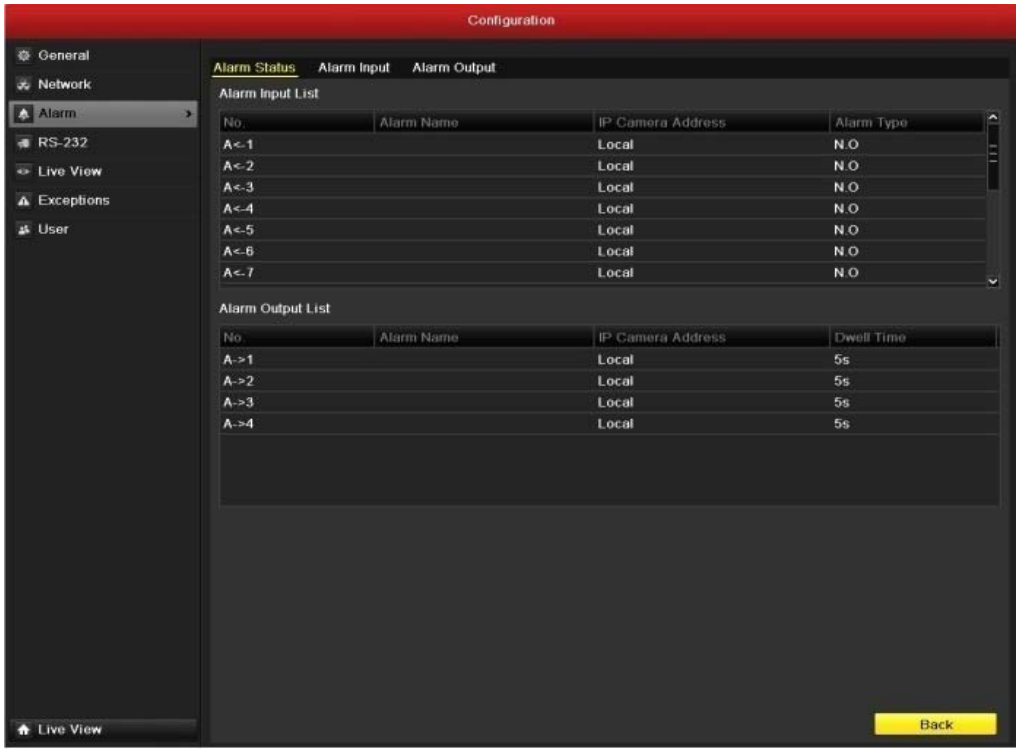


Figure 9.6 Alarm Status Interface of System Configuration

9.2 Setting up Sensor Alarms

Set up handling method of an external sensor alarm. ***Steps:***

1. Enter Alarm Settings of System Configuration and select an alarm input. Menu-> Configuration-> Alarm. Select Alarm Input tab to enter Alarm Input Settings interface.
2. Set up the handling method of the selected alarm input. Check the **Setting** checkbox and click **Handling** button to set up its alarm response actions.
3. Select Trigger Channel tab and select one or more channels which will start to record/capture or become full-screen monitoring when an external alarm is input.
4. Select Arming Schedule tab to set the channel's arming schedule. Choose one day of a week and maximum eight time periods can be set within each day. Time periods shall not be repeated or overlapped.
5. Select Handling tab to set up alarm response actions of the alarm input (please refer to Section 9.6). Repeat the above steps to set up arming schedule of other days of a week. You can also use Copy button to copy an arming schedule to other days.
6. If necessary, select PTZ Linking tab and set PTZ linkage of the alarm input. Set PTZ linking parameters and press **OK** to complete the settings of the alarm input. Please check whether the PTZ or speed dome supports PTZ linkage. One alarm input can trigger presets, patrol or pattern of more than one channel. But presets, patrols and patterns are exclusive.
7. If you want to set handling method of another alarm input, repeat the above steps or just copy the above settings to it.

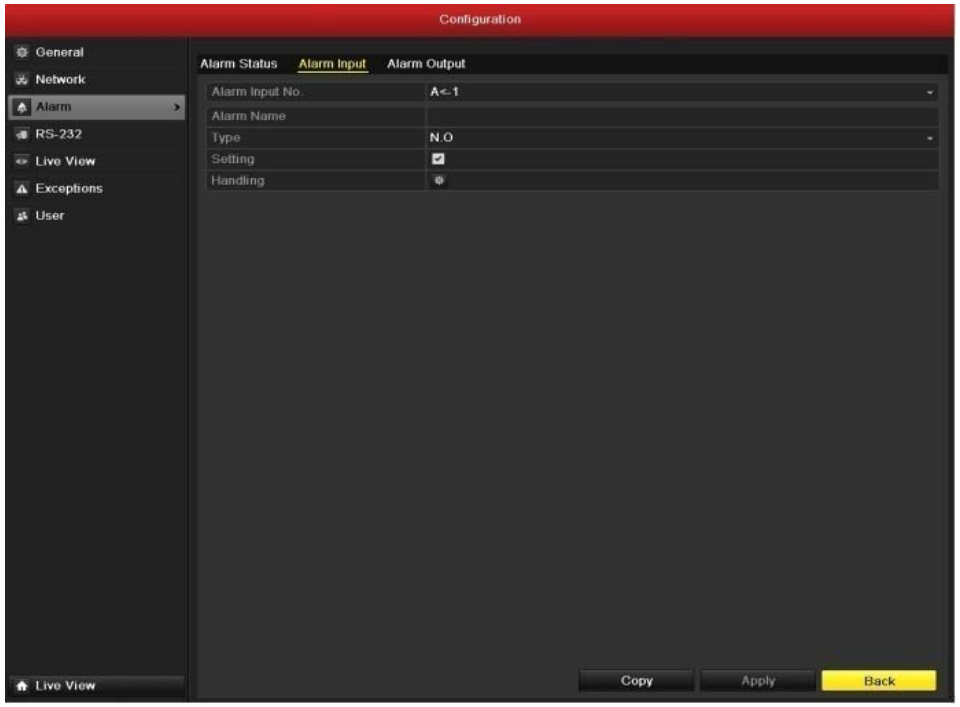


Figure 9.7 Alarm Input Setup Interface

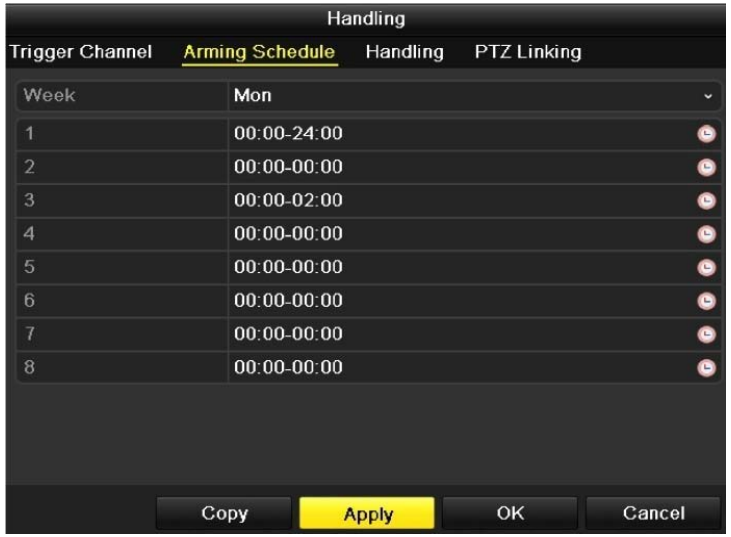


Figure 9.8 Set Arming Schedule of Alarm Input

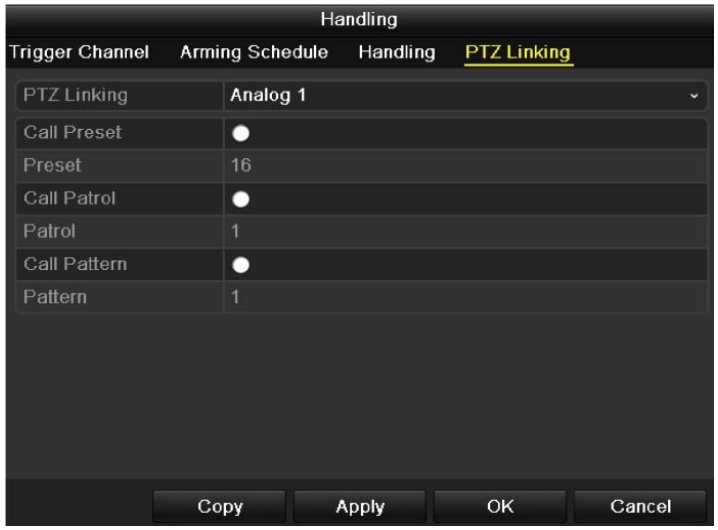


Figure 9.9 Set PTZ Linking of Alarm Input

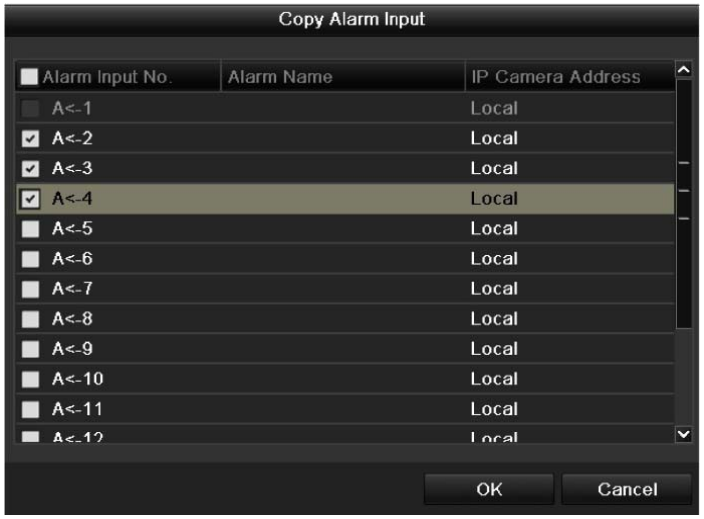


Figure 9.10 Copy Settings of Alarm Input

9.3 Detecting Video Loss

Detect video loss of a channel and take alarm response action(s).

Steps:

1. Enter Video Loss interface of Camera Management and select a channel you want to detect. Menu> Camera> Video Loss
2. Set up handling method of video loss. Check the checkbox of "Enable Video Loss Alarm", and press Handling button to set up handling method of video loss.
3. Set up arming schedule of the channel. Select Arming Schedule tab to set the channel's arming schedule. Choose one day of a week and up to eight time periods can be set within each day. Time periods shall not be repeated or overlapped.
4. Select **Handling** tab to set up alarm response action of video loss (please refer to *Section 9.6*). Repeat the above steps to set up arming schedule of other days of a week. You can also use Copy button to copy an arming schedule to other days. Click the **OK** button to complete the video loss settings of the channel.
5. If you want to set up video loss handling method for another channel, repeat the above steps or just copy the above settings to it.

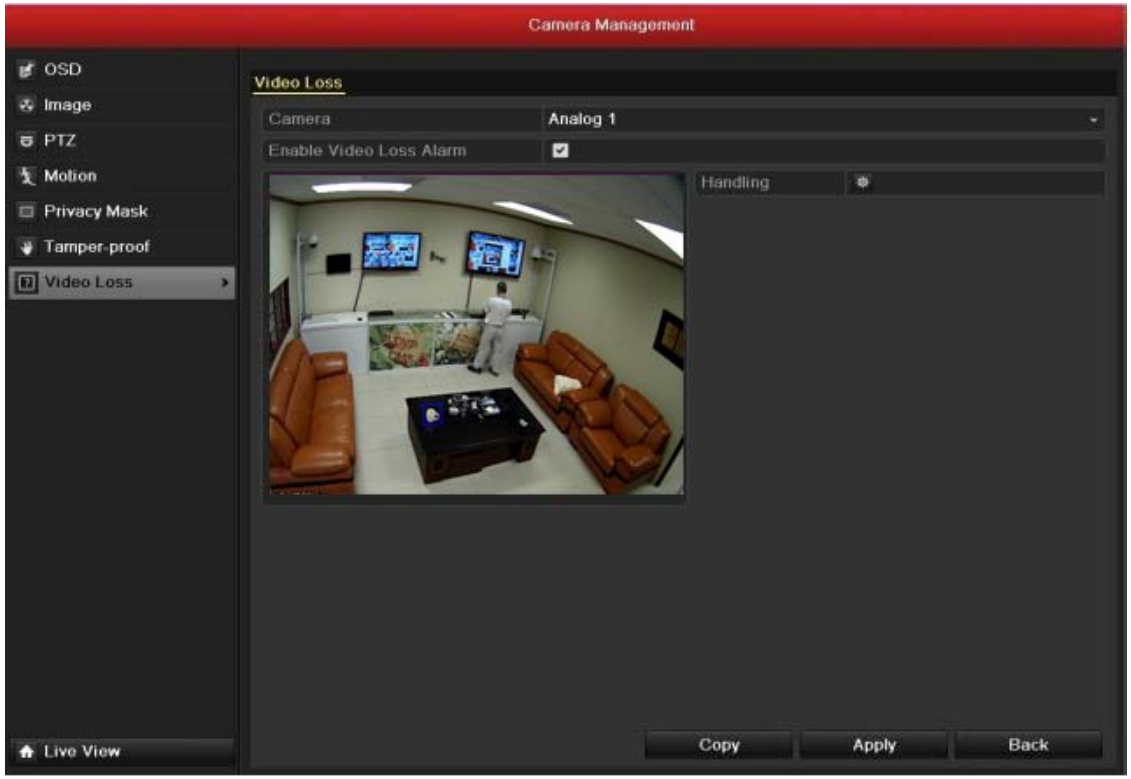


Figure 9.11 Video Loss Setup Interface

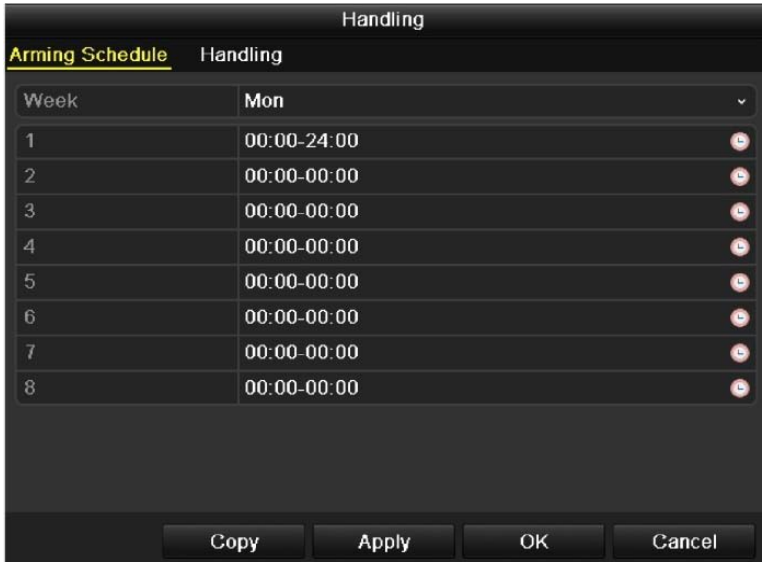


Figure 9.13 Set Arming Schedule of Video Loss

Figure 9.14 Copy Settings of Video Loss

9.4 Detecting Video Tampering

Trigger alarm when the lens is covered and take alarm response action(s). ***Steps:***

1. Enter Video Tampering interface of Camera Management and select a channel you want to detect video tampering. Menu> Camera> Tamper-proof

2. Set up the video tampering handling method of the channel. Check the checkbox of "Enable Video Tampering". Drag the sensitivity bar and choose a proper sensitivity level. Use the mouse to draw an area you want to detect video tampering. Press **Handling** button to set up handling method of video tampering.

3. Set up arming schedule and alarm response action of the channel.
1) Press Arming Schedule tab to set the channel's arming schedule.
2) Choose one day of a week and Max. Eight time periods can be set within each day.
Note: Time periods shall not be repeated or overlapped.

4. Select **Handling** tab to set up alarm response action of video tampering alarm (please refer to Section *9.6*). Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days. Click the **OK** button to complete the video tampering settings of the channel.

5. If you want to set up video loss handling method for another channel, repeat step two and three, or just copy the above settings to it.

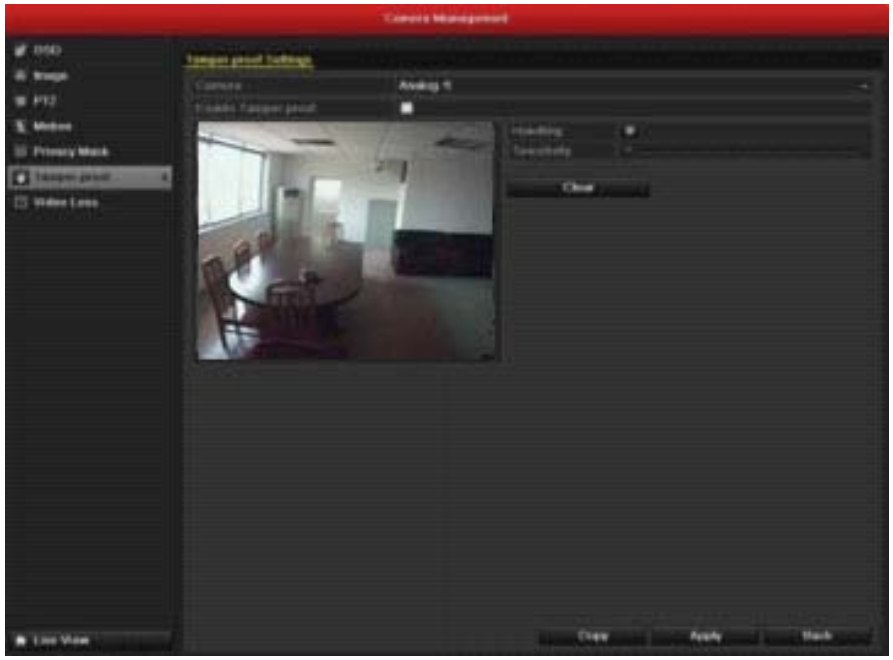


Figure 9.15 Tamper-proof Setup Interface

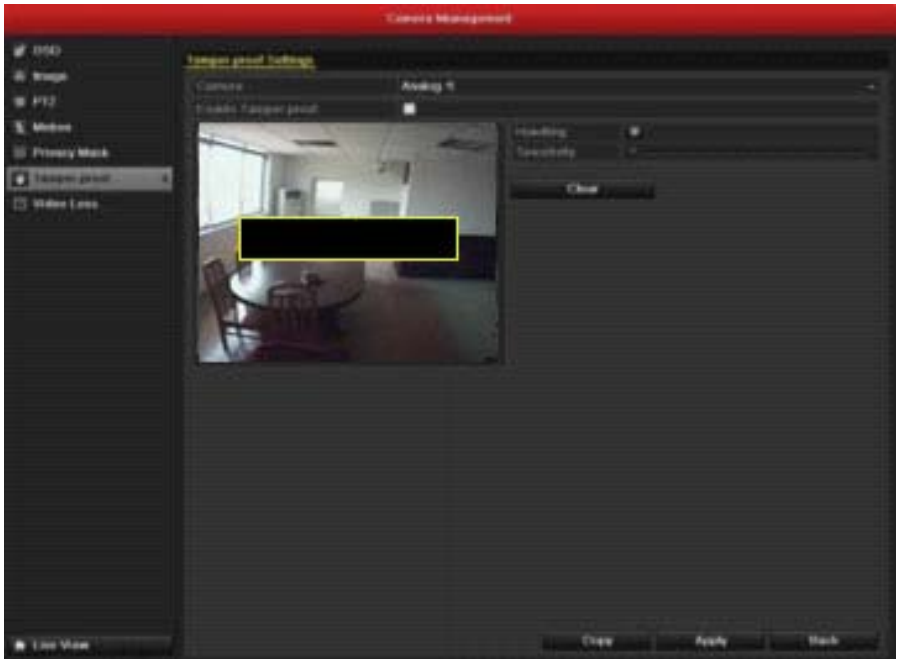


Figure 9+.16 Set Detection Area and Sensitivity of Video Tampering

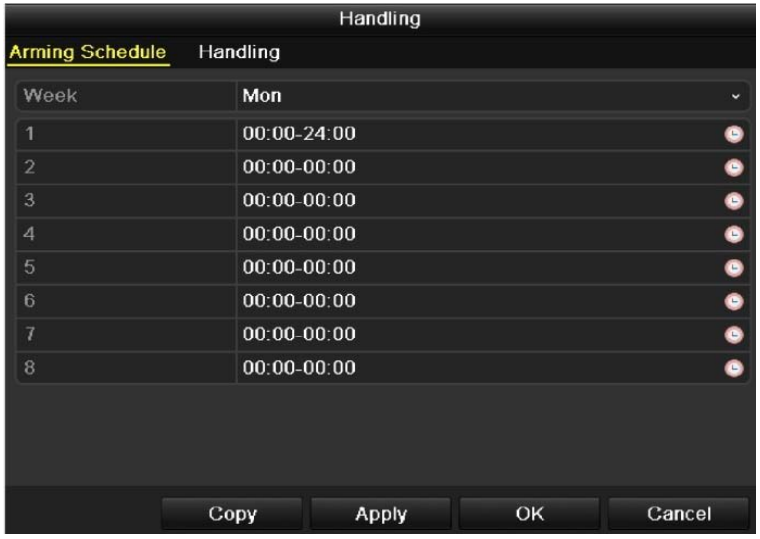


Figure 9.17 Set Arming Schedule of Video Tampering

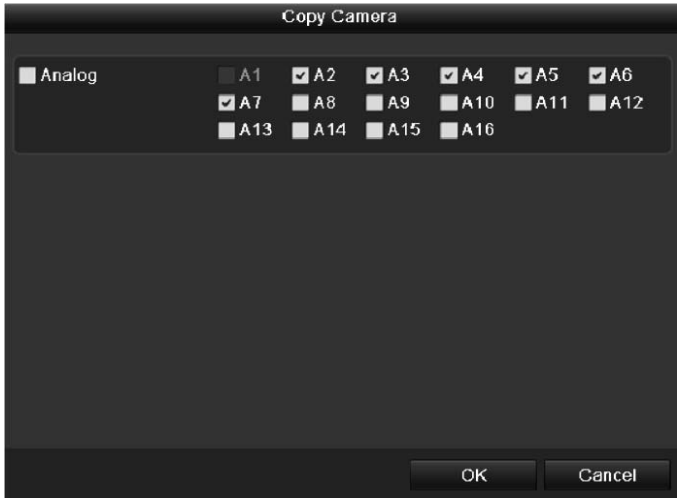


Figure 9.18 Copy Settings of Video Tampering

9.5 Handling Exceptions

Exception settings refer to the handling method of various exceptions, e.g.

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error or unformatted HDD.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Abnormal Video Signal:** Unstable video signal.
- **Input / Output Video Standard Mismatch:** I/O video standards do not match.
- **Abnormal Record/Capture:** No space for saving recorded files or captured images.

Steps:

Enter Exception interface of System Configuration and handle various exceptions. Menu-> Configuration-> Exceptions. Please refer to Section 9.6 for detailed alarm response actions.

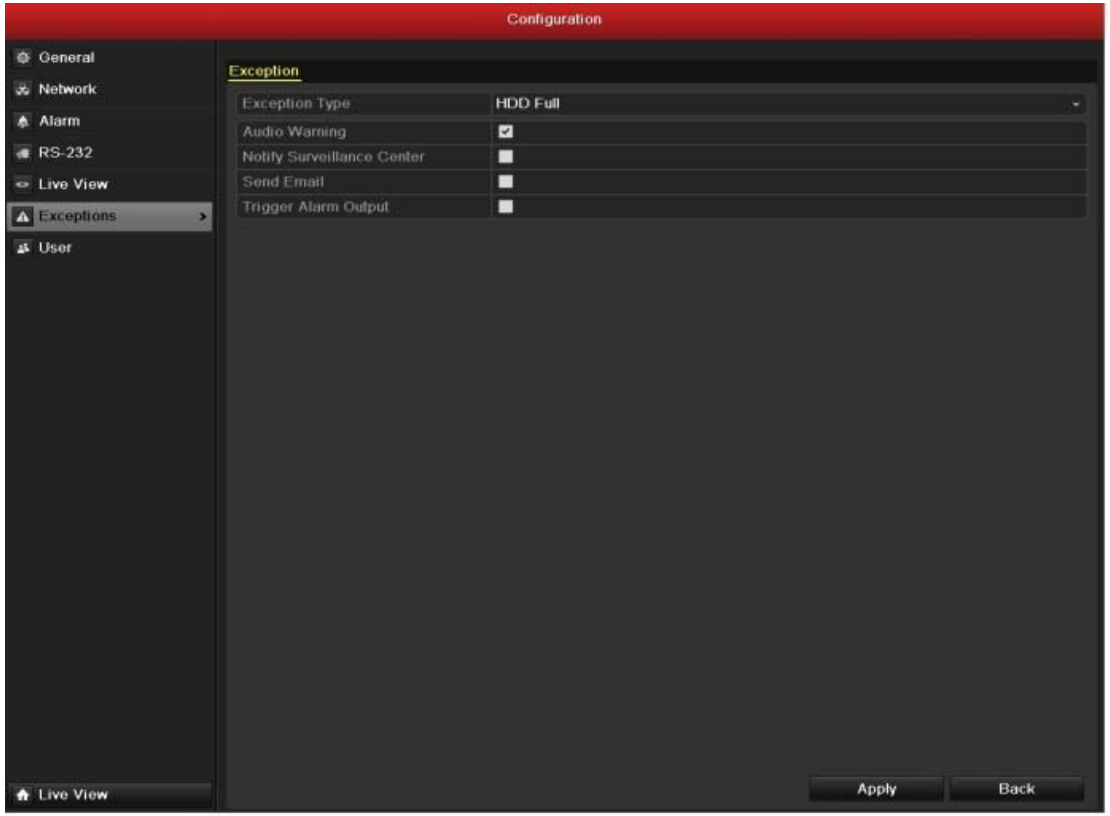


Figure 8.19 Exceptions Setup Interface

9.6 Setting Alarm Response Actions

Take alarm response actions will be activated when an alarm or exception occurs, including Full Screen Monitoring, Audible Warning (buzzer), Notify Surveillance Center, Upload Picture to FTP, Trigger Alarm Output and Send Email.

Full Screen Monitoring
When an alarm is triggered, the local monitor (VGA or BNC monitor) display in full screen the video image from the alarming channel configured for full screen monitoring. If alarms are triggered simultaneously in several channels, their full-screen images will be switched at an interval of 10 seconds (default dwell time). A different dwell time can be set by going to Manu > Configuration >Live View> Alarm Picture Dwell Time. Auto-switch will terminate once the alarm stops and you will be taken back to the Live View interface.

Note: You must select during "Trigger Channel" settings the channel(s) you want to make full screen monitoring.

Audible Warning
Trigger an audible *beep* when an alarm is detected.

Notify Surveillance Center
Sends an exception or alarm signal to remote alarm host when an event occurs. The alarm host refers to the PC installed with Remote Client.

Note: The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Section 10.2.6* for details of alarm host configuration.

Upload Captured Pictures to FTP
Capture the image when an alarm is triggered and upload the picture to a FTP server.

Note: Please set up FTP address and the remote FTP server first.

Email Linkage
Send an email with alarm information to a user or users when an alarm is detected. Please refer to Section *10.2.10* for details of Email configuration.

Trigger Alarm Output
Trigger an alarm output when an alarm is triggered. **Steps:**

1. Enter Alarm Output interface. Menu> Configuration> Alarm> Alarm Output. Select an alarm output and set alarm name and dwell time. Press **Schedule** button to set the arming schedule of alarm output. If "Manually Clear" is selected in the dropdown list of Dwell Time, you can clear it only by going to Menu> Manual> Alarm.
2. Set up arming schedule of the alarm output. Choose one day of a week and up to 8 time periods can be set within each day. Time periods shall not be repeated or overlapped.
3. Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days. Click the **OK** button to complete the video tampering settings of the channel.
4. You can also copy the above settings to another alarm output No.

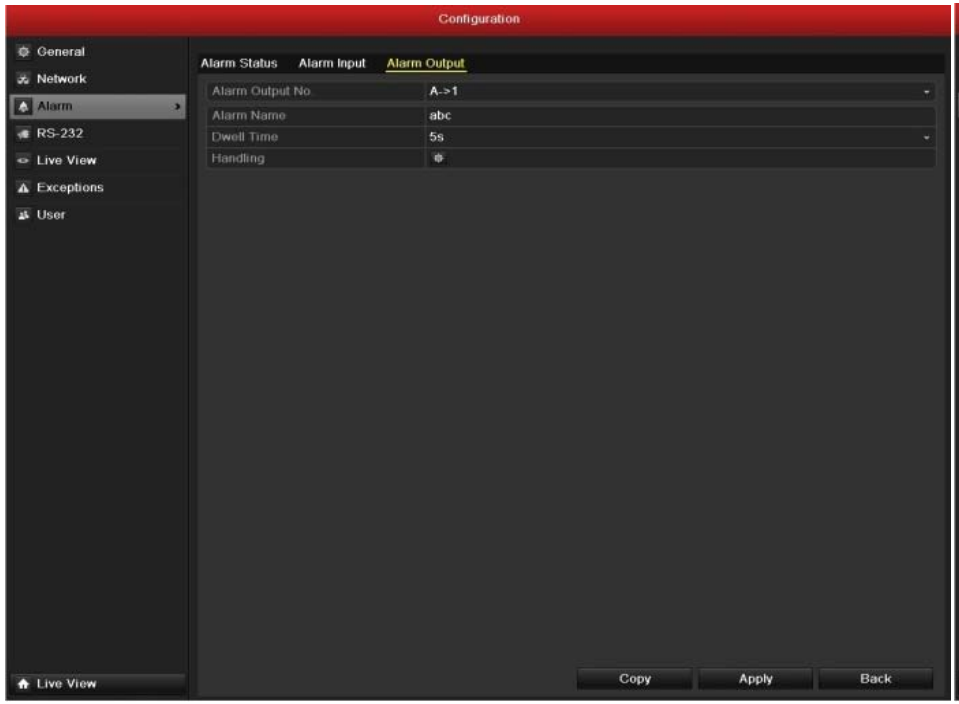


Figure 9.20 Alarm Output Setup Interface

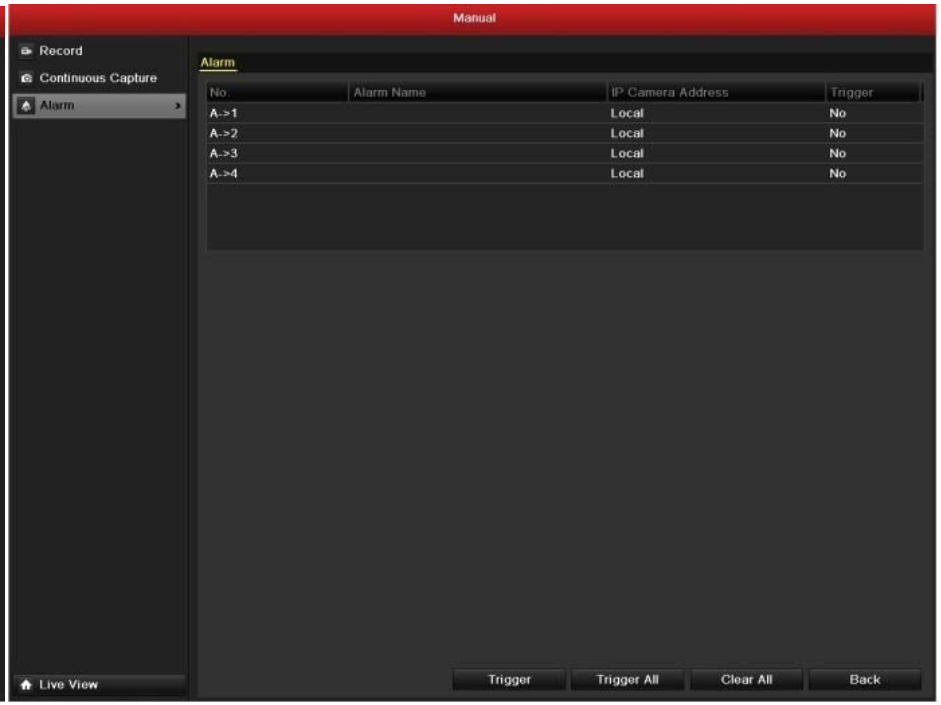


Figure 9.21 Clear or Trigger Alarm Output Manually

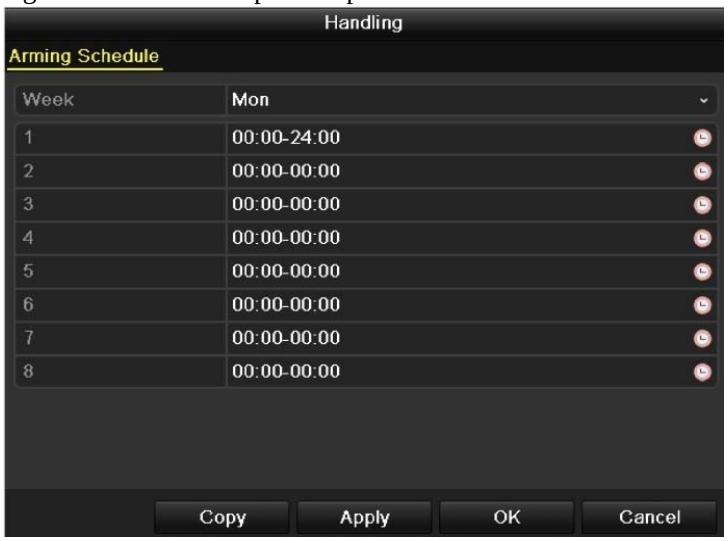


Figure 9.22 Set Arming Schedule of Alarm Output

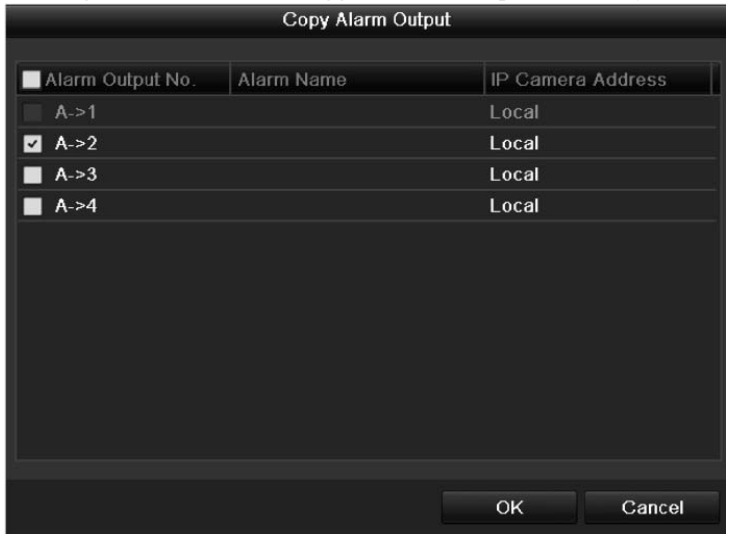


Figure 8.22 Copy Settings of Alarm Output

9.7 Triggering or Clearing Alarm Output Manually

Sensor alarm can be triggered or cleared manually. If “Manually Clear” is selected in the dropdown list of dwell time of an alarm output, the alarm can be cleared only by pressing **Clear** button in the following interface.

Steps:

Select the alarm output you want to trigger or clear and make related operations. Menu> Manual> Alarm
Press **Trigger/Clear** button if you want to trigger or clear an alarm output. Press **Trigger All** button if you want to trigger all alarm outputs.
Press **Clear All** button if you want to clear all alarm output.

10 Network Settings

10.1 Configure General Settings

Network settings must be properly configured before you operate DVR over network. ***Steps:***

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **General** tab.
3. In the **General Settings** interface, you can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server. If the DHCP server is available, you can click the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.
   Note: The valid value range of MTU is 500 ~ 9676.
4. After having configured the general settings, click the **Apply** button to save the settings.

10.2 Configuring Advanced Settings

10.2.1 Configuring PPPoE Settings

Your DVR also allows access by Point-to-Point Protocol over Ethernet (PPPoE). ***Steps:***
1. Enter the **Network Settings** interface. Menu > Configuration > Network
2. Select the **PPPoE** tab to enter the PPPoE Settings interface, as shown in Figure 10.2.
3. Check the **PPPoE** checkbox to enable this feature.
4. Enter **User Name**, **Password**, and **Confirm Password** for PPPoE access. The User Name and Password should be assigned by your ISP.
5. Click the **Apply** button to save and exit the interface.
6. After successful settings, the system asks you to reboot the device to enable the new settings, and the PPPoE dial-up is automatically connected after reboot.

You can go to Menu > Maintenance > System Info > Network interface to view the status of PPPoE connection. Please refer to Section 14.1Viewing System Information for PPPoE status.

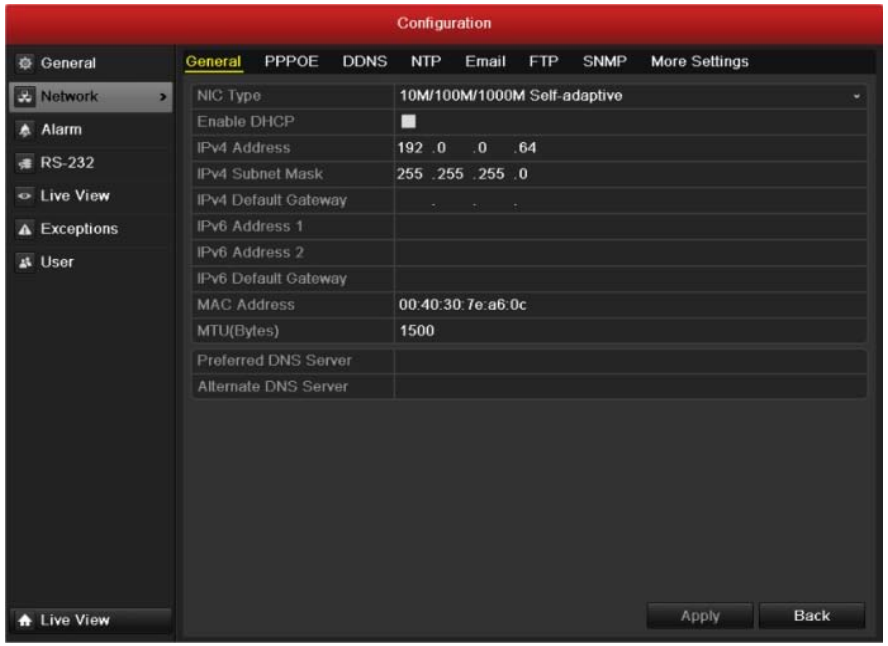


Figure 10.1 Network Settings Interface

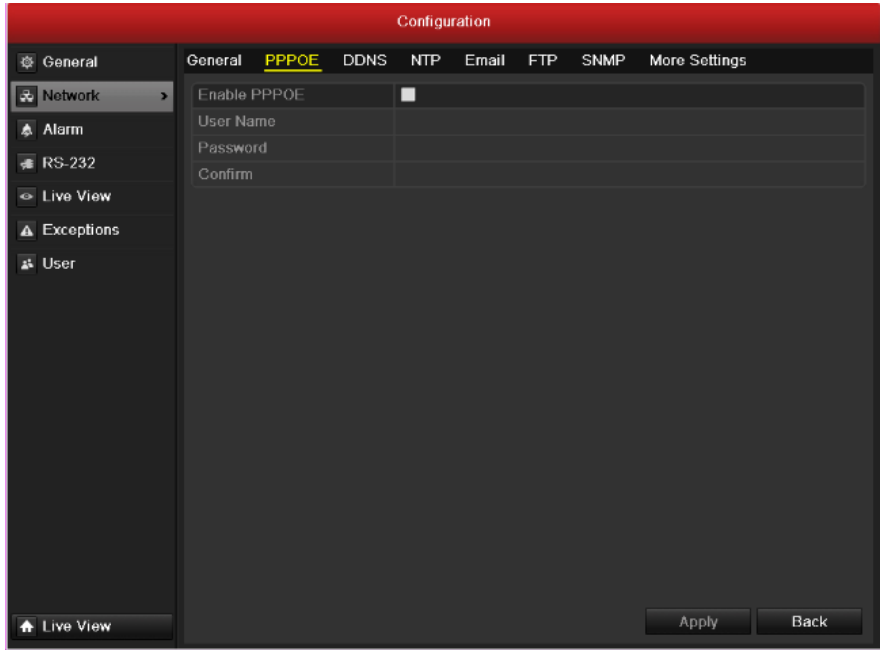


Figure 10.2 PPPoE Settings Interface

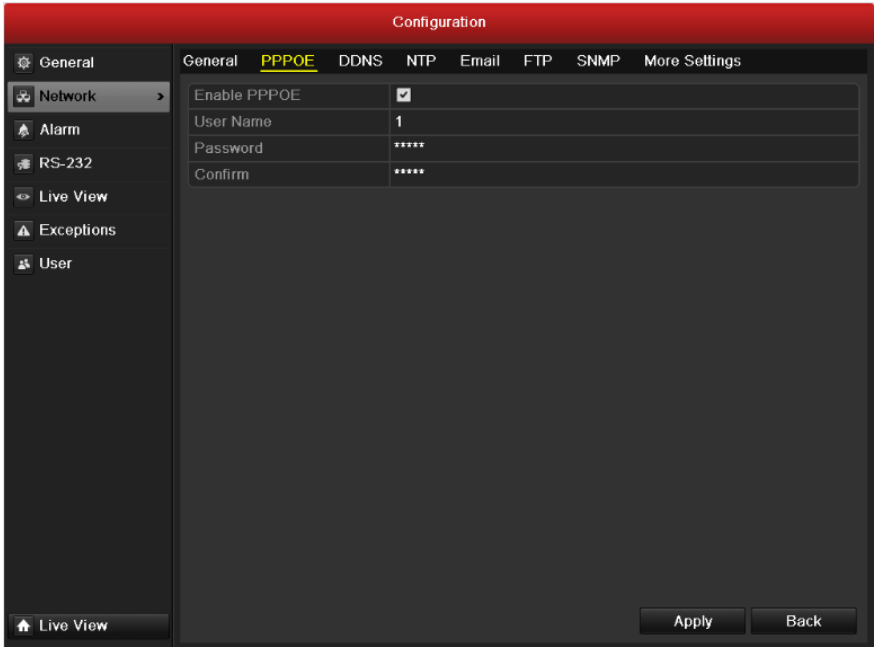


Figure 10.3 PPPoE Settings Interface

10.2.2 Configuring DDNS

If your DVR is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access. Prior registration with your ISP is required before configuring the system to use DDNS. ***Steps:***

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **DDNS** tab to enter the DDNS Settings interface, as shown in Figure 10.4.

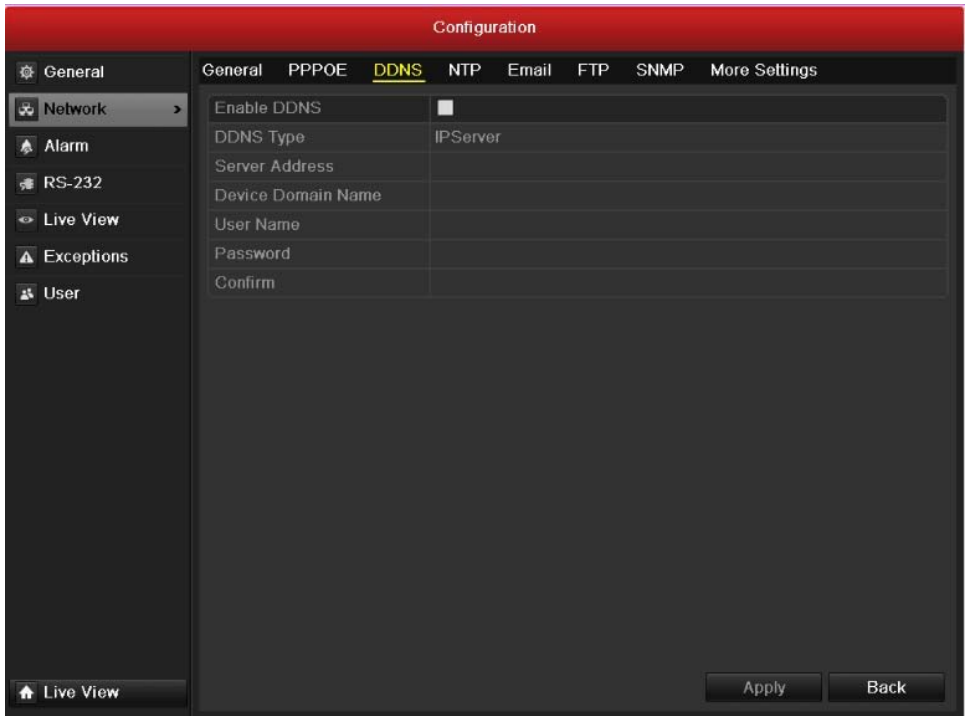


Figure 10.4 DDNS Settings Interface

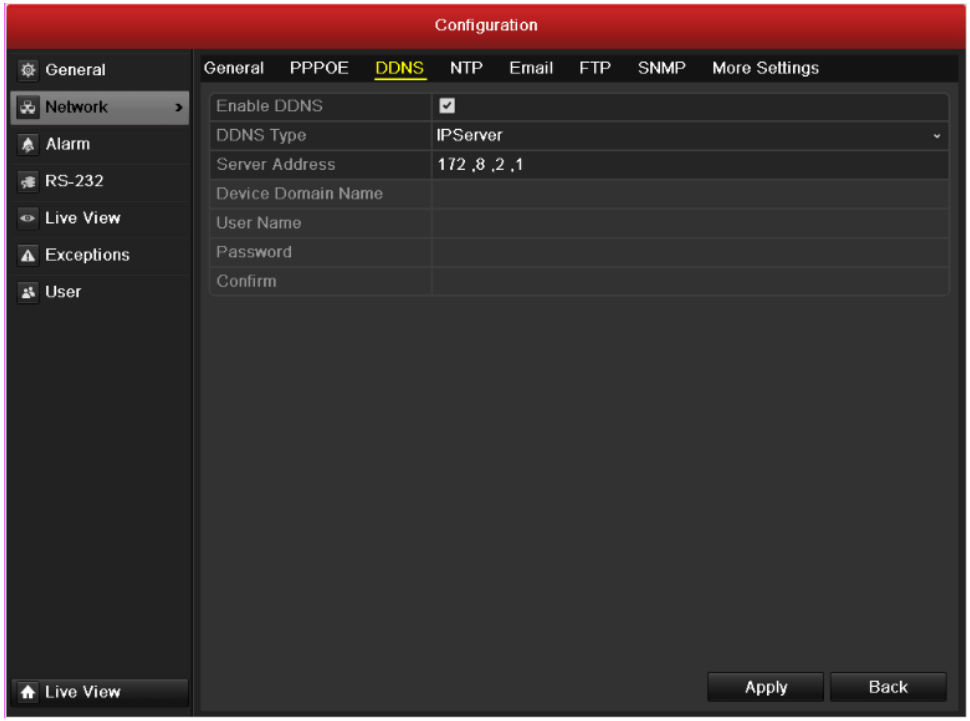


Figure 10.5 IPServer Settings Interface

3. Check the **DDNS** checkbox to enable this feature.

4. Select **DDNS Type**. Four different DDNS types are selectable: IPServer, DynDNS, PeanutHull and NO-IP.
   - **IPServer:** Enter **Server Address** for IPServer.

   - **DynDNS:**

1) Enter **Server Address** for DynDNS (i.e. members.dyndns.org).
2) In the DVR Domain Name text field, enter the domain obtained from the DynDNS website.
3) Enter the **User Name** and **Password** registered in the DynDNS website.

• **PeanutHull:** Enter User Name and Password obtained from the PeanutHull website.

• **NO-IP:** Enter the account information in the corresponding fields. Refer to the DynDNS settings.
1) Enter **Server Address** for NO-IP.
2) In the DVR Domain Name text field, enter the domain obtained from the NO-IP website (www.no-ip.com).
3) Enter the **User Name** and **Password** registered in the NO-IP website.

5. Click the **Apply** button to save and exit the interface.

Figure 10.6 DynDNS Settings Interface

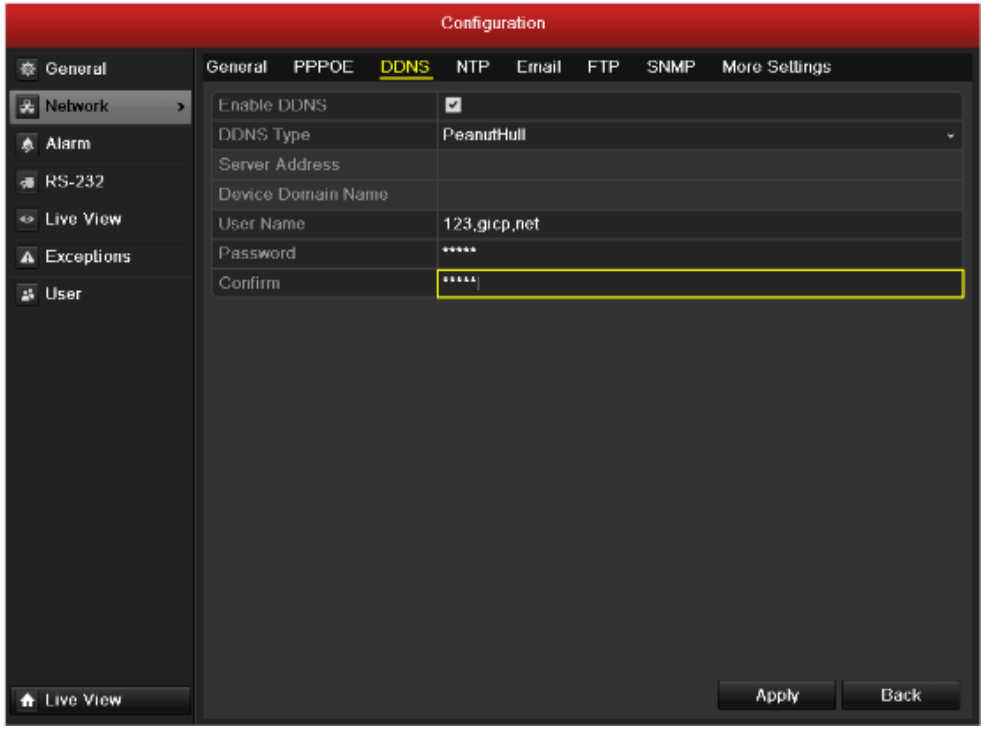


Figure 10.7 Peanut Hull Settings Interface

Figure 10.8 NO-IP Settings Interface

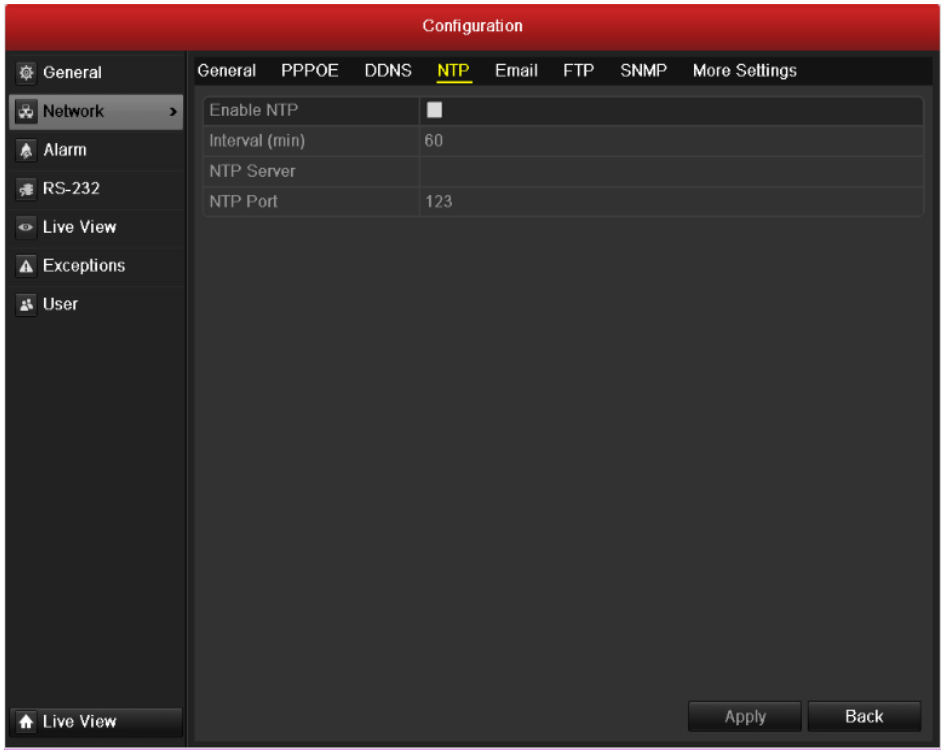


Figure 10.9 NTP Settings Interface

10.2.3 Configuring NTP Server

A Network Time Protocol (NTP) Server can be configured on your DVR to ensure the accuracy of system date/time. ***Steps:***

1. Enter the Network Settings interface. Menu -> Configuration -> Network
2. Select the **NTP** tab to enter the NTP Settings interface, as shown in Figure 10.9.
3. Check the **Enable NTP** checkbox to enable this feature.
4. Configure the following NTP settings:
   - **Interval:** Time interval between the two synchronizing actions with NTP server. The unit is minute.
   - **NTP Server:** IP address of NTP server.
   - **NTP Port:** Port of NTP server.
5. Click the **Apply** button to save and exit the interface.

Note: The time synchronization interval can be set from 1 to 10080min, and the default value is 60min. If the DVR is connected to a public network, you should use a NTP

server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the DVR is setup in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.

10.2.4 Configuring FTP Server

The FTP can be configured on your DVR to realize dual-directional transmission of control files over Internet. And the captured pictures of DVR can be uploaded to FTP server as well. ***Steps:***

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **FTP** tab to enter the FTP Settings interface, as shown in Figure 10.10.
3. Check the **Enable FTP** checkbox to enable this feature.
4. Configure the NTP settings, including FTP server, port, user name, password and the directory.

   Directory: In the **Directory** field, you can select the Root Directory, Parent directory and secondary directory. When the Parent Directory is selected, you have the option to use the Device Name, Device No or Device IP for the name of the directory; and the when the Secondary Directory is selected, you can use the Camera Name or Camera No. as the name of the directory.
5. Click the **Apply** button to save and exit the interface.

Note: Please make sure the remote FTP server has been started up before setting the FTP parameters.

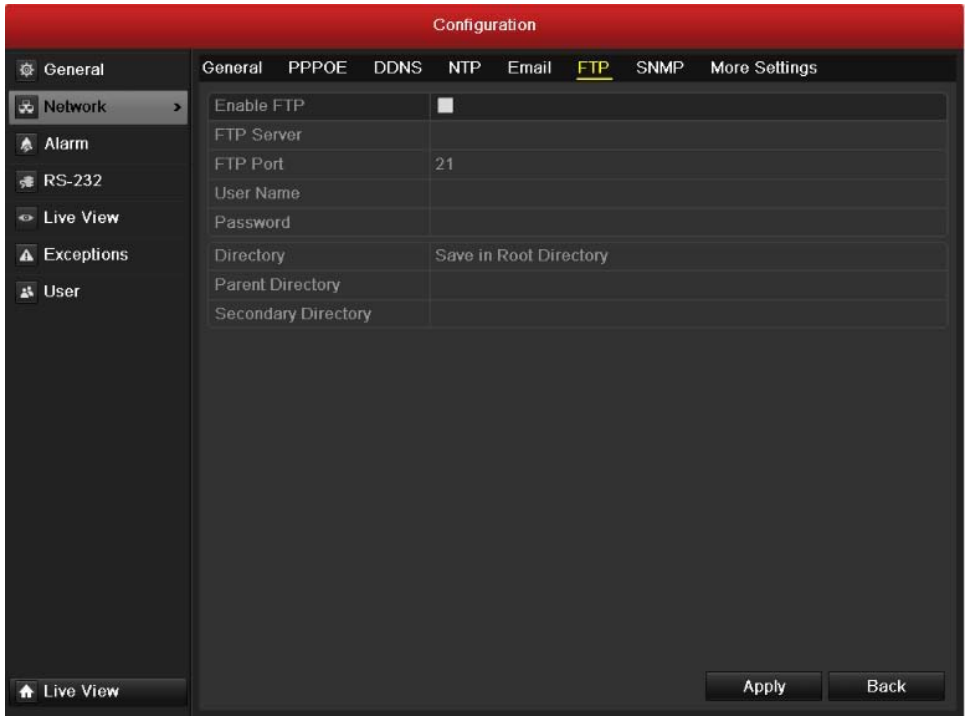


Figure 10.10 FTP Settings Interface

Figure 10.11 Configure FTP Settings

10.2.5 Configuring SNMP

You can use SNMP protocol to get device status and parameters related information. ***Steps:***

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **SNMP** tab to enter the SNMP Settings interface, as shown in Figure 10.12.
3. Check the **SNMP** checkbox to enable this feature.
4. Configure the SNMP settings.
5. Click the **Apply** button to save and exit the interface.

Note: Before setting the SNMP, please download the SNMP software and manage to receive the device information via SNMP port. By setting the Trap Address, the DVR is allowed to send the alarm event and exception message to the surveillance center.

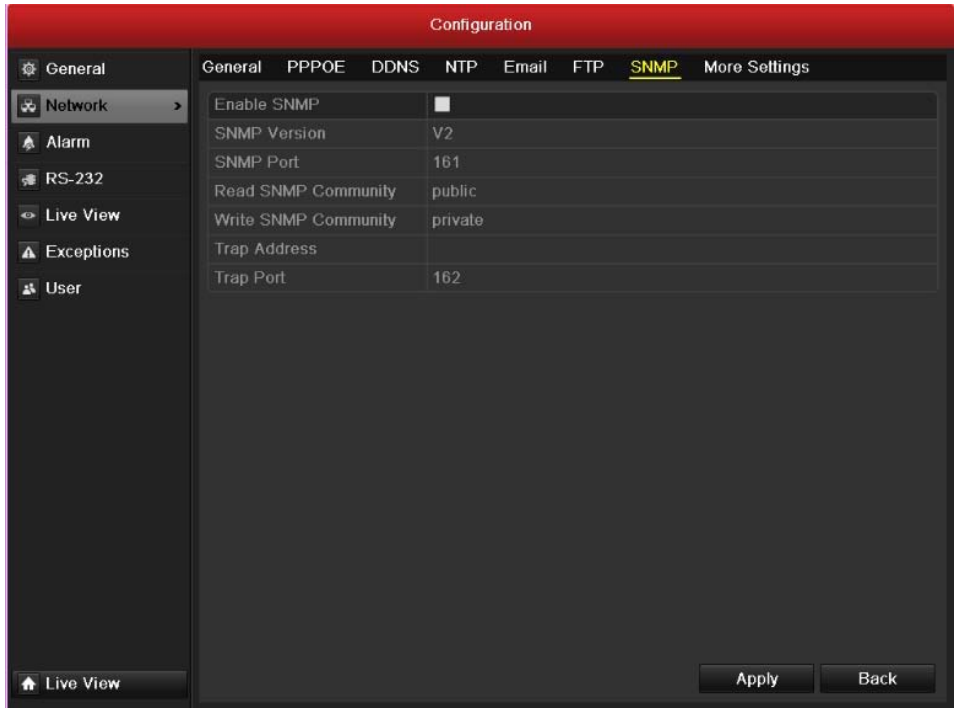


Figure 10.12 SNMP Settings Interface

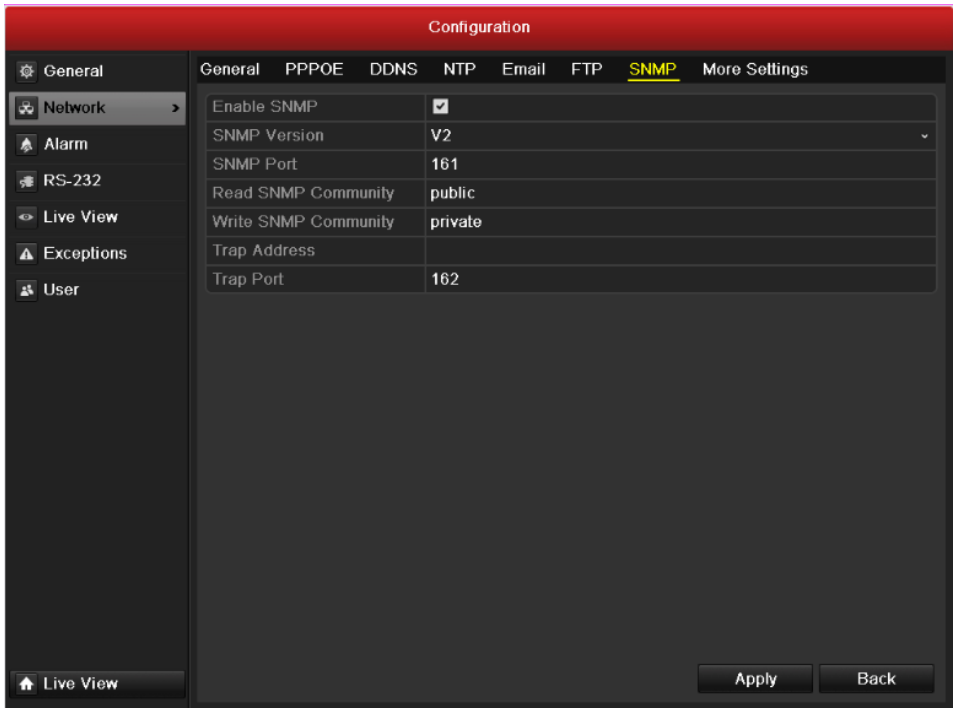


Figure 10.13 Configure SNMP Settings

10.2.6 Configuring Remote Alarm Host

With a remote alarm host configured, the DVR will send the alarm event or exception message to the host when an alarm is triggered. The remote alarm host must have the Network Video Surveillance software installed.

Steps:

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface, as shown in Figure 10.14.
3. Enter **Alarm Host IP** and **Alarm Host Port** in the text fields.
   The **Alarm Host IP** refers to the IP address of the remote PC on which the Network Video Surveillance Software (e.g., iVMS-4000) is installed, and the **Alarm Host Port** must be the same as the alarm monitoring port configured in the software (default port is 0).
4. Click the **Apply** button to save and exit the interface.

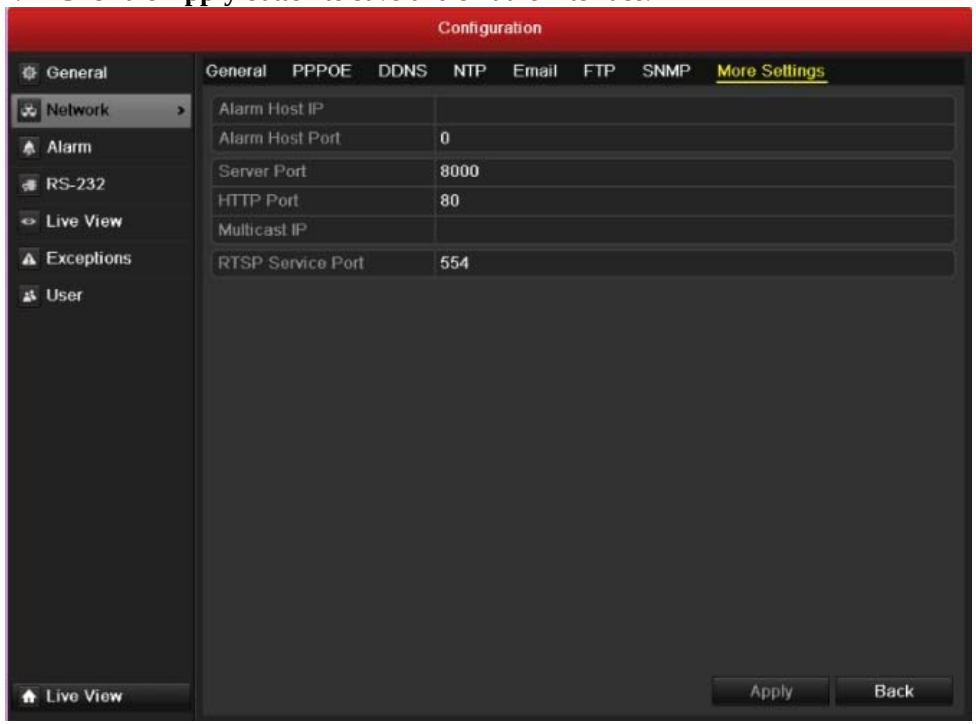


Figure 10.14 More Settings Interface

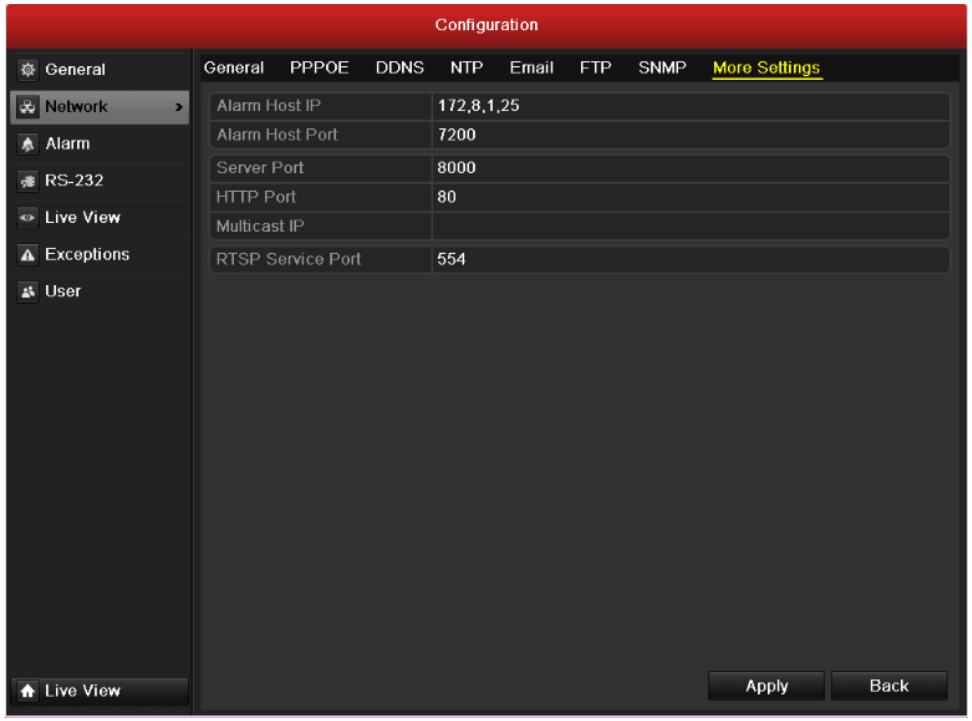


Figure 10.15 Configure Alarm Host

10.2.7 Configuring Multicast

The multicast can be configured to realize live view for more than 128 cameras through network. A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. It is recommended to use the IP address ranging from 239.252.0.0 to 239.255.255.255. ***Steps:***

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface, as shown in Figure 10.14.
3. Set **Multicast IP**, as shown in Figure 9.19. When adding a device to the Network Video Surveillance Software, the multicast address must be the same as the DVR's multicast IP.
4. Click the **Apply** button to save and exit the interface.

Figure 10.16 Configure Multicast

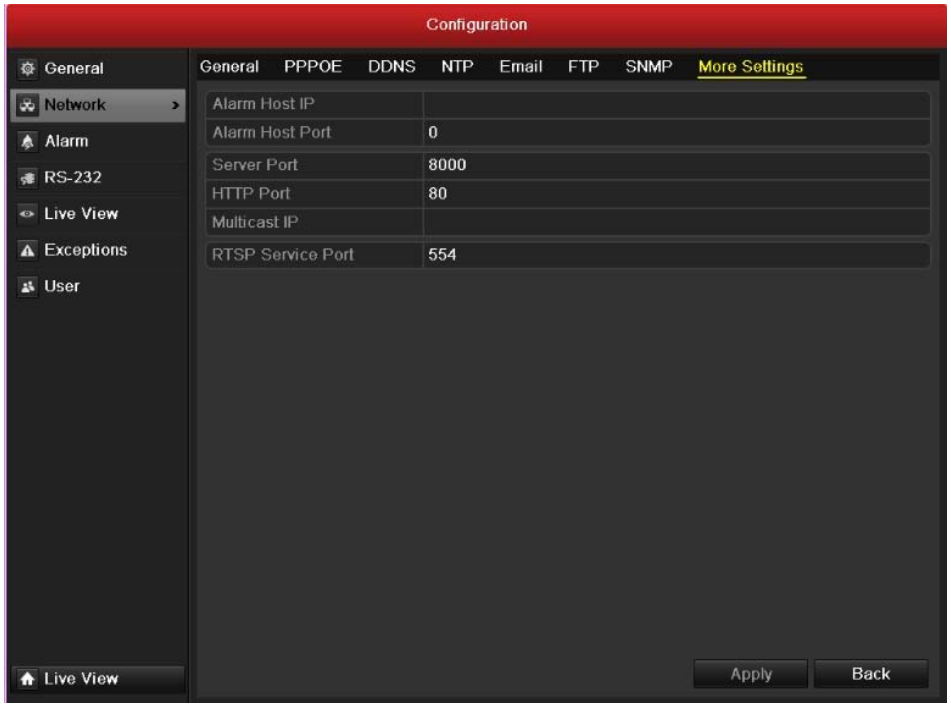


Figure 10.17 RTSP Settings Interface

10.2.8 Configuring RTSP

The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.
Steps:

1. Enter the Network Settings menu by clicking Menu > Configuration > Network.
2. Select the **More Settings** tab to enter the More Settings menu, as shown in Figure 10.14.
3. Enter the RTSP port in the text field of **RTSP Service Port**. The default RTSP port is 554, and you can change it according to different requirements.
4. Click the **Apply** button to save and exit the menu.

10.2.9 Configuring Server and HTTP Ports

You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80. ***Steps:***

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface, as shown in Figure 10.14.

3. Enter new **Server Port** and **HTTP Port**, as shown in Figure 10.18.
4. Enter the Server Port and HTTP Port in the text fields. The default Server Port is 8000 and the HTTP Port is 80, and you can change them according to different requirements.
5. Click the **Apply** button to save and exit the interface.

Note: The Server Port should be set to the range of 2000-65535 and it is used for remote client software access. The HTTP port is used for remote IE access.

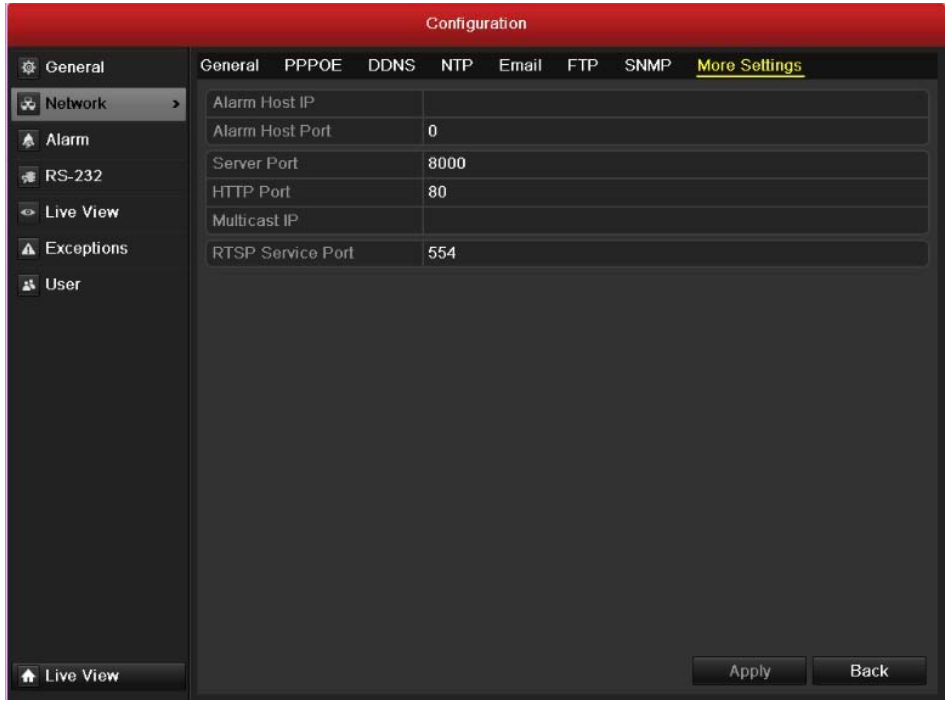


Figure 10.18 Host/Others Settings Menu

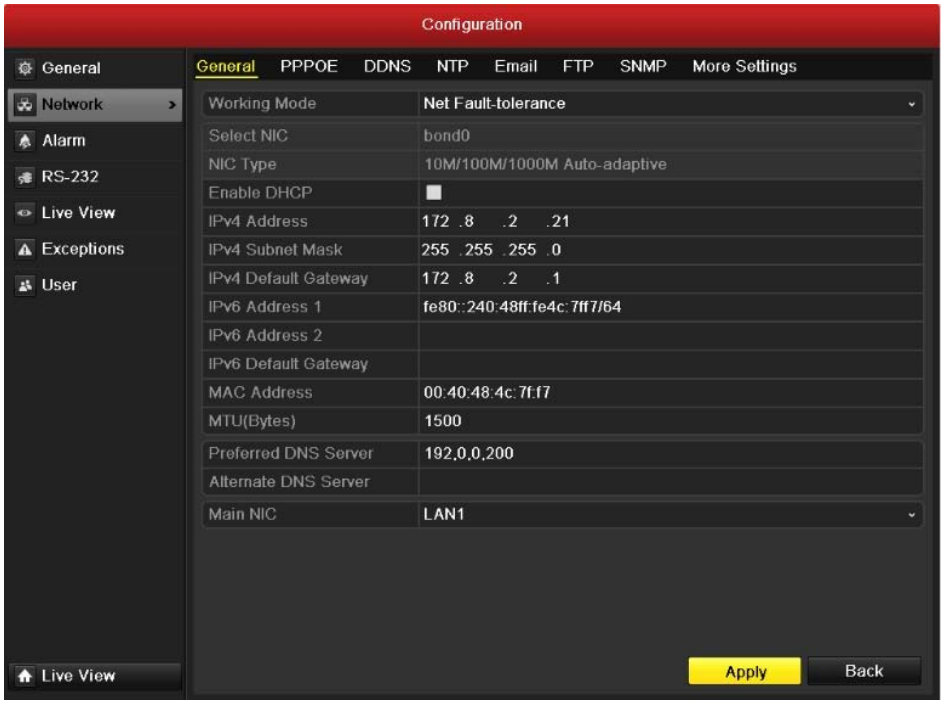


Figure 10.19 Network Settings Interface

10.2.10 Configuring Email

The system can be configured to send an Email notification to all designated users if an alarm event is detected, etc., an alarm or motion event is detected or the administrator password is changed. Before configuring the Email settings, the DVR must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification.

Steps:

1. Enter the Network Settings interface. Menu > Configuration > Network
2. Set the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu, as shown in Figure 10.19.
3. Click the **Apply** button to save the settings.
4. Select the **Email** tab to enter the Email Settings interface.

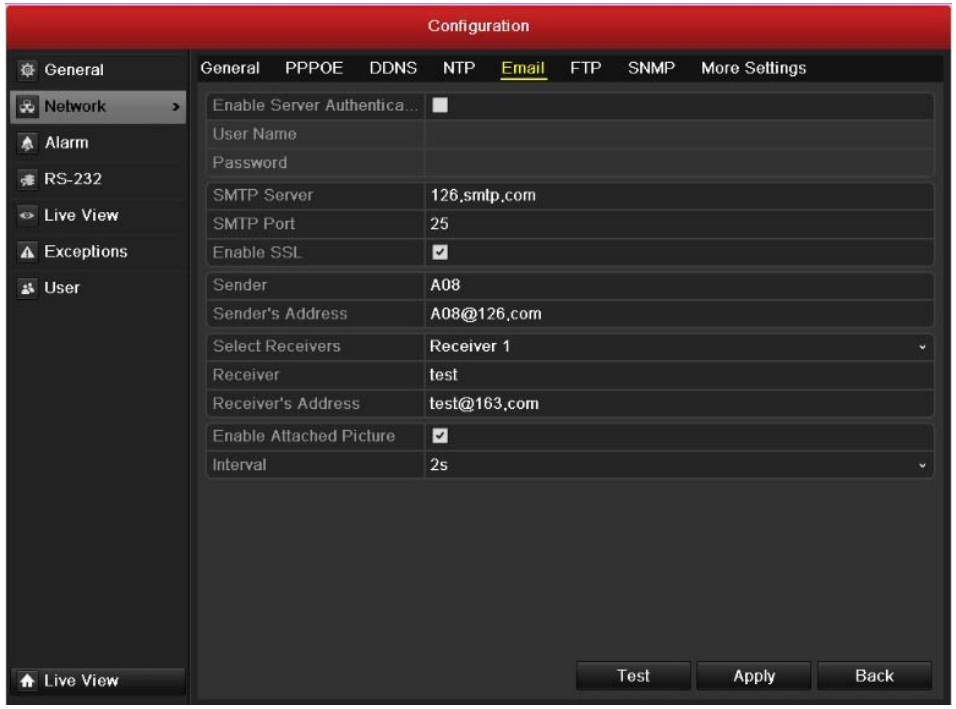
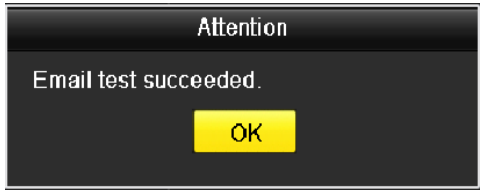


Figure 10.20 Email Settings Interface

5. Configure the following Email settings:
   Enable Server Authentication (optional): Check the checkbox to enable the server authentication feature.
   User Name: The user account of sender's Email for SMTP server authentication.
   Password: The password of sender's Email for SMTP server authentication.
   SMTP Server: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).
   SMTP Port No.: The SMTP port. The default TCP/IP port used for SMTP is 25.
   Enable SSL(optional): Click the checkbox to enable SSL if required by the SMTP server.
   Sender: The name of sender.
   Sender's Address: The Email address of sender.
   Select Receivers: Select the receiver. Up to 3 receivers can be configured.
   Receiver: The name of user to be notified.
   Receiver's Address: The Email address of user to be notified.
   Enable Attached Pictures: Check the checkbox of **Enable Attached Picture** if you want to send email with attached alarm images. The interval is the time of two adjacent alarm images. You can also set SMTP port and enable SSL here.
   Interval: The interval refers to the time between two actions of sending attached pictures.
   E-mail Test: Sends a test message to verify that the SMTP server can be reached.
6. Click the **Apply** button to save the Email settings.

7. You can click the **Test** button to test whether your Email settings work. The corresponding Attention message box will pop up. Refer to Figure 10.21.



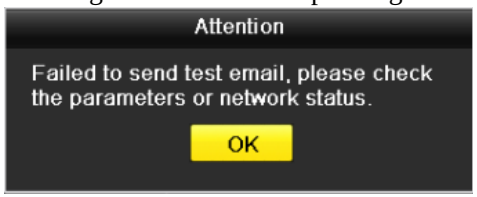


Figure 10.21 Email Testing Attention

10.3 Checking Network Traffic

You can check the network traffic to obtain real-time information of DVR such as linking status, MTU, sending/receiving rate, etc. ***Steps:***

1. Enter the Network Traffic interface. Menu > Maintenance > Net Detect
2. You can view the sending rate and receiving rate information on the interface. The traffic data is refreshed every 1 second.

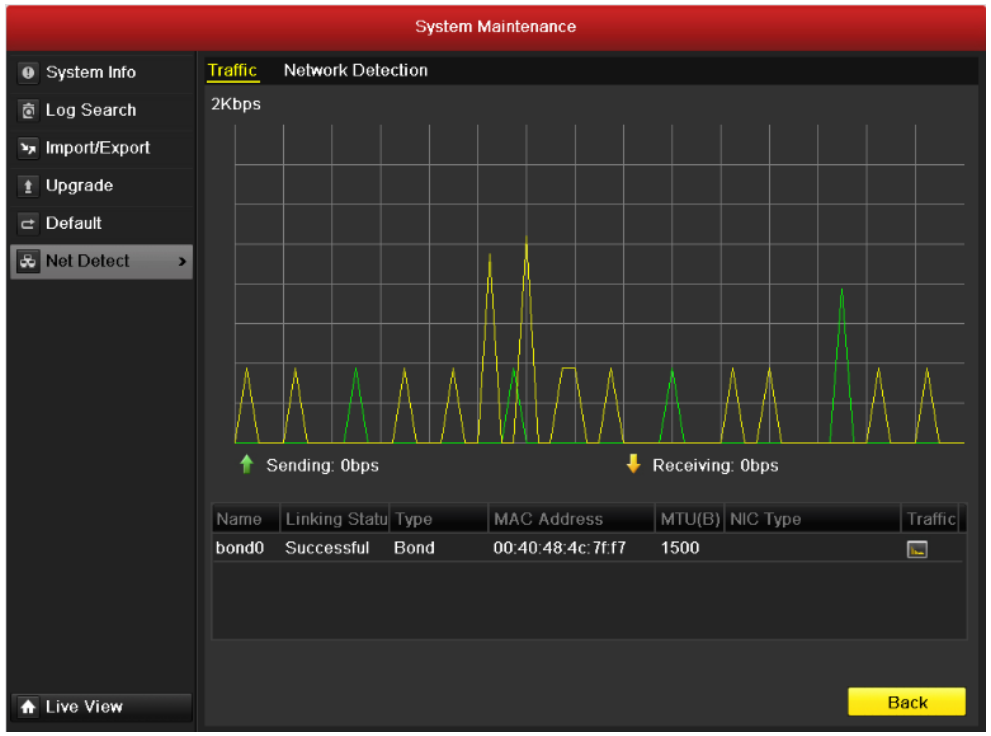


Figure 10.22 Network Traffic Interface

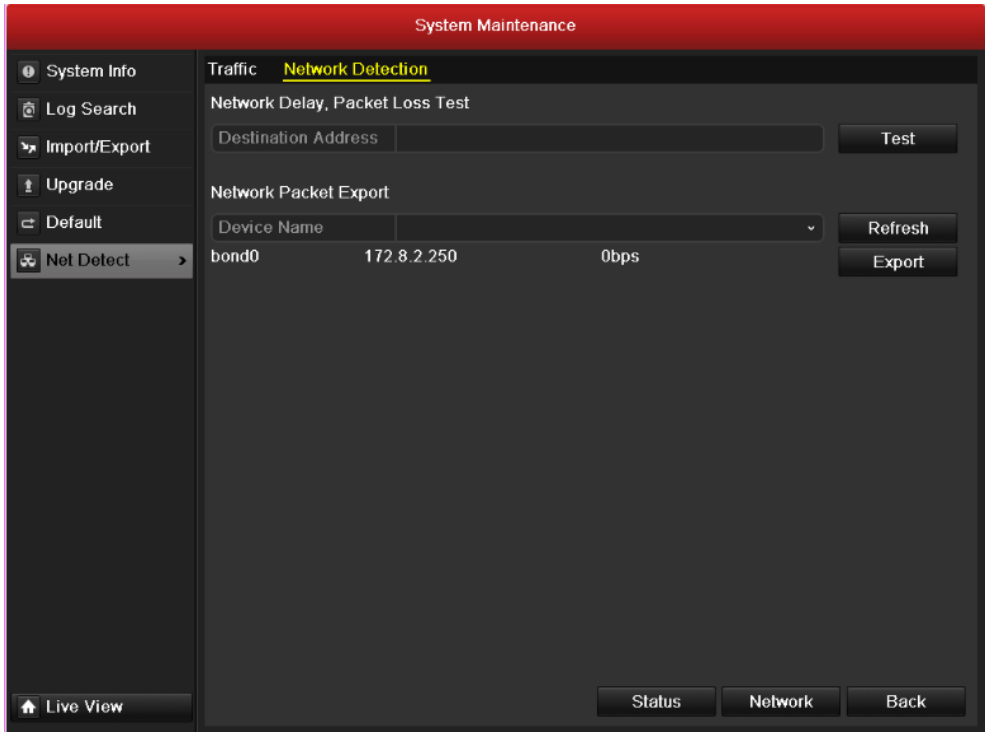


Figure 10.23 Network Detection Interface

10.4 Configuring Network Detection

You can obtain network connecting status of DVR through the network detection function, including network delay, packet loss, etc.

10.4.1 Testing Network Delay and Packet Loss

Steps:

1. Enter the Network Traffic interface. Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection menu, as shown in Figure 10.23.
3. Enter the destination address in the text field of **Destination Address**.
4. Click the **Test** button to start testing network delay and packet loss. The testing result pops up on the window. If the testing is failed, the error message box will pop up as well. Refer to Figure 10.24.

Figure 10.24 Testing Result of Network Delay and Packet Loss

10.4.2 Exporting Network Packet

By connecting the DVR to network, the captured network data packet can be exported to USB-flash disk, SATA/eSTATA CD-RW and other local backup devices.

Steps:

1. Enter the Network Traffic interface. Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection interface.
3. Select the backup device from the dropdown list of Device Name, as shown in Figure 10.25.

   Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, please check whether it is compatible with the DVR. You can format the backup device if the format is incorrect.

4. Click the **Export** button to start exporting.
5. After the exporting is complete, click **OK** to finish the packet export, as shown in Figure 10.26.

Note: Up to 1M data can be exported each time.

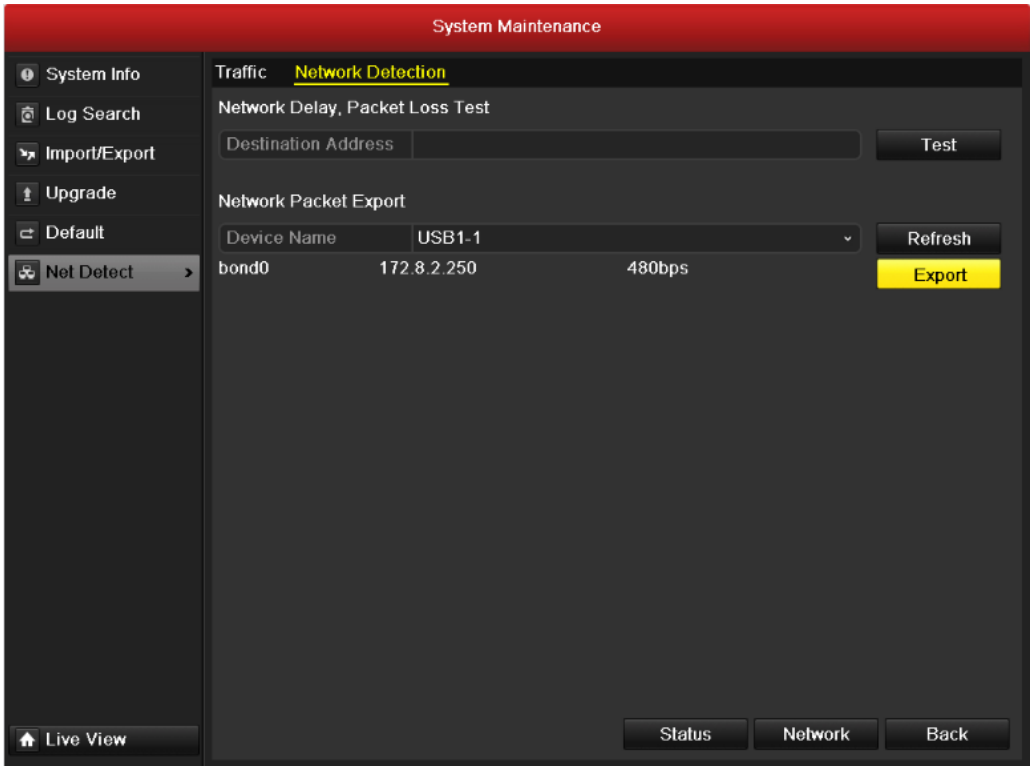


Figure 10.25 Export Network Packet

Figure 10.26 Packet Export Attention

11 PTZ Control

11.1 Configuring PTZ Settings

Before you start, please check that the PTZ and the DVR are connected properly through RS-485 interface. The configuring of the PTZ parameters should be done before you

set the PTZ camera. Follow the procedure to set the parameters for PTZ. ***Steps:***

1. Enter the PTZ Settings interface. Menu >Camera> PTZ
2. Choose the camera for PTZ setting next to **Camera** label.
3. Enter the parameters of the PTZ camera. All the parameters should be exactly the same as the PTZ camera parameters.
4. Click **Copy** if you want to configure same settings to other PTZ cameras.
5. Click **Apply** button to save and exit menu.

Figure 11.1 PTZ- General

11.2 Setting PTZ Presets, Patrols & Patterns

Before you start, please make sure that the presets, patrols and patterns should be supported by PTZ protocols.

11.2.1 Customizing Presets

Follow the steps to set the Preset location which you want the PTZ camera to point to when an event takes place. ***Steps:***

1. Enter the PTZ Control interface. Menu->Camera->PTZ->More Settings.
2. Use the directional button to wheel the camera to the location where you want to set preset.
3. Click the round icon before **Save Preset**.
4. Click the preset number to save the preset. Repeat the steps2-4 to save more presets. If the number of the presets you want to save is more than 17, you can click […] and choose the available numbers.

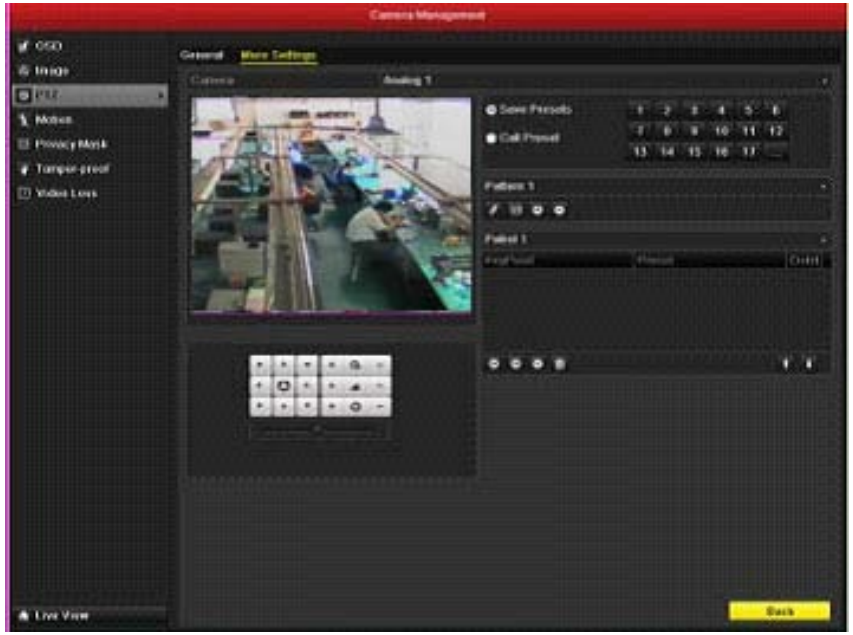


Figure 11.2 PTZ- More Settings

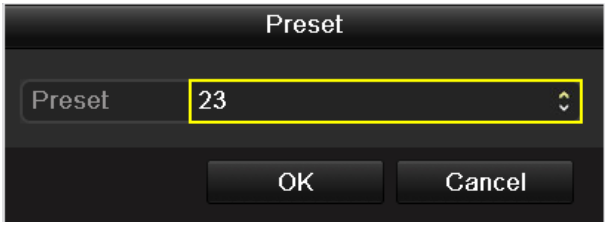


Figure 4.3 More Presets

11.2.2 Calling Presets

This feature enables the camera to point to a specified position such as a window when an event takes place.

Call preset in the PTZ setting interface:

Steps:

1. Enter the PTZ Control interface. Menu>Camera>PTZ>More Settings
2. Check the round icon before **Call Preset**.
3. Choose the preset number.

Figure 11.4 PTZ- Call Preset

Figure 11.5 PTZ Toolbar

Call preset in live view mode:

Steps:

1. Press the PTZ button on the front panel or click the PTZ Control icon in the quick setting bar to enter the PTZ setting menu in live view mode.
2. Choose C**amera** in the list on the menu.
3. Choose preset in the **Preset** list.

11.2.3 Customizing Patrols

Patrols can be set to move the PTZ to different key points and have it stay there for a set duration before moving on to the next key point. The key points are corresponding to the presets. The presets can be set following the steps above in ***Customizing Presets***.

Steps:

1. Enter the PTZ Control interface. Menu->Camera->PTZ->More Settings
2. Select patrol number.
3. Select the under Patrol option box to add key points for the patrol.
4. Configure key point parameters, such as the key point No., duration of staying for one key point and speed of patrol. The key point is corresponding to the preset. The **Key Point No.** determines the order at which the PTZ will follow while cycling through the patrol. The **Duration** refers to the time span to stay at the corresponding key point. The **Speed** defines the speed at which the PTZ will move from one key point to the next.
5. Click **OK** to save the key point to the patrol. Repeat the above steps to add more key points. You can also delete all the key points by clicking the trash icon

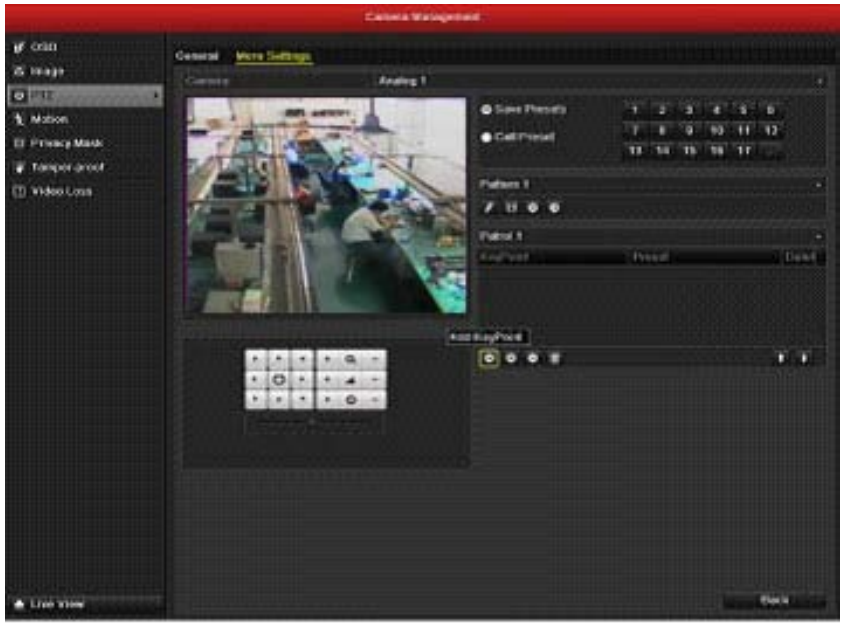


Figure 11.6 PTZ- Add Key Point

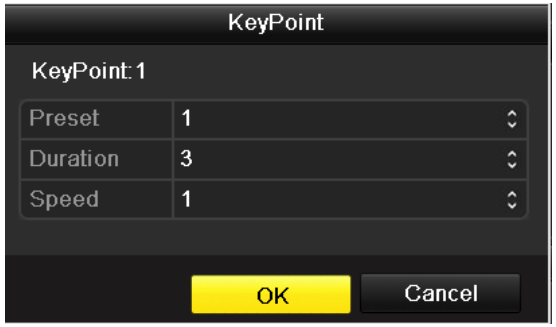


Figure 11.7 Key point Configuration

Figure 11.8 Key Points Deletion

11.2.4 Calling Patrols

Calling a patrol makes the PTZ to move according the predefined patrol path.

Calling patrol in the PTZ setting interface:

Steps:

1. In the PTZ setting interface. Menu-> Camera-> PTZ-> More Settings
2. Select the patrol number, and then click to call the patrol
3. Click to stop it.

Figure 11.9 Calling Patrol

Figure 11.10 PTZ Toolbar- Patrol

Calling preset in live view mode:

Steps:

1. Press PTZ control on the front panel or on the remote, or click PTZ Control icon on the quick setting toolbar, to show the PTZ control toolbar.
2. Choose **Patrol** on the control bar.
3. Click the patrol you want to call.

11.2.5 Customizing Patterns

Patterns can be set by recording the movement of the PTZ. You can call the pattern to make the PTZ movement according to the predefined path.

Steps:

1. Enter the PTZ Control interface. Menu->Camera->PTZ->More Settings
2. Choose pattern number in the option box.
3. Click , and use your mouse to drag the image or click the eight directional buttons in the control box under the image to move the PTZ camera. The movement of the PTZ is recorded as the pattern.
4. Click to save the pattern. Repeat the above steps to save more patterns.

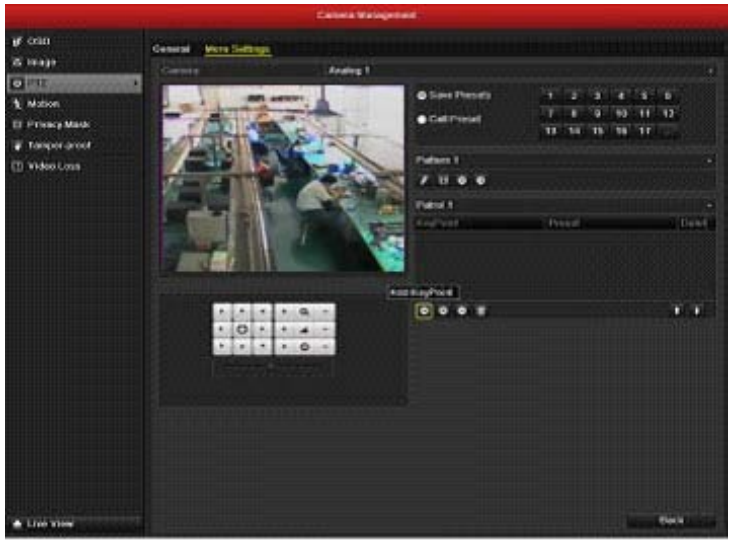


Figure 11.11 PTZ- Pattern

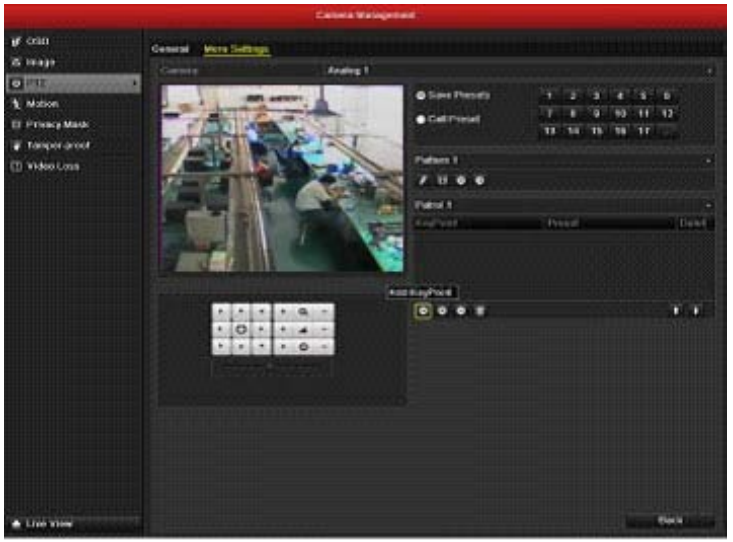


Figure 11.12 PTZ- Calling Pattern

Figure 11.13 PTZ Toolbar- Pattern

11.2.6 Calling Patterns

Follow the procedure to move the PTZ camera according to the predefined patterns.

Call pattern in the PTZ setting interface. ***Steps:***

1. Enter the PTZ Control interface.
2. Select the pattern number.
3. Click , then the PTZ moves according to the pattern. Click to stop it.

Call pattern in live view mode. ***Steps:***

1. In the live view mode, press PTZ control on the front panel or on the remote control, or click PTZ Control icon on the quick setting toolbar.
2. And then choose **Pattern** on the control bar.
3. Click the pattern number you want to call

11.3 PTZ Control Toolbar

In the Live View mode, you can press the PTZ Control button on the front panel or on the remote control, or choose the PTZ Control icon to enter the PTZ toolbar.

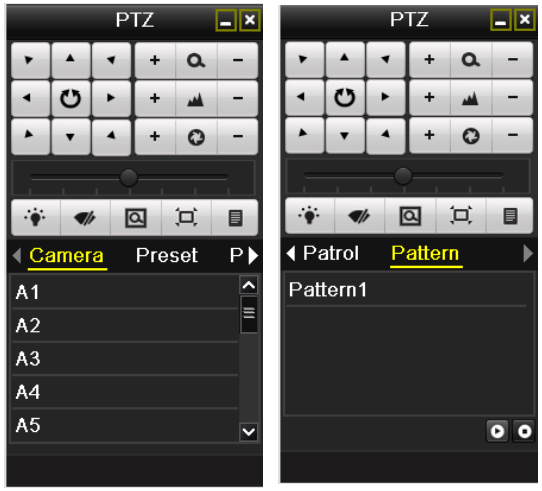


Figure 11.14 PTZ Toolbar

Icon	Description	Icon	Description	Icon	Description
	Direction button and the auto-cycle button		Zoom+, Focus+, Iris+		Zoom-, Focus-, Iris-
	The speed of the PTZ movement		Light on/off		Wiper on/off
	Zoom		Middle	Preset	Preset
Patrol	Patrol	Pattern	Pattern		Menu
	Previous item		Next item		Start pattern/patrol
	Stop the patrol or pattern movement		Minimize windows		Exit

12 Camera Management

12.1 Configuring OSD Settings

You can configure the OSD (On-screen Display) settings for the camera, including date /time, camera name, etc. ***Steps:***

1. Enter the OSD Configuration interface. Menu -> Camera -> OSD

2. Select the camera to configure OSD settings.
3. Edit the Camera Name in the text field.
4. Configure the Display Name, Display Date and Display Week by clicking the checkbox.
5. Select the Date Format, Time Format and Display Mode.
6. You can use the mouse to click and drag the text frame on the preview window to adjust the OSD position.
7. Copy Camera Settings
   1) If you want to copy the OSD settings of the current camera to other cameras, click the **Copy** button to enter the Copy Camera interface, as shown in Figure 12.2.
   2) Select the camera (s) to be configured with the same OSD settings. You can also click the checkbox of Analog to select all cameras.
   3) Click the **OK** button to finish the Copy settings and back to the OSD Configuration interface.
8. Click the **Apply** button to apply the settings.

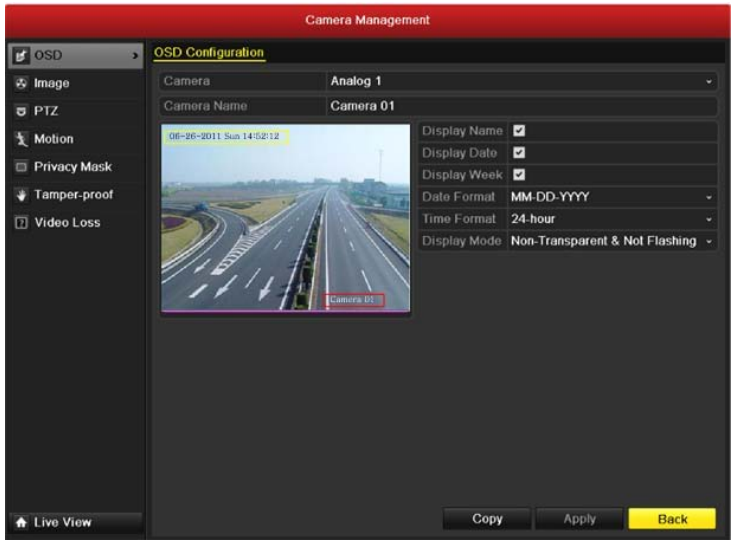


Figure 12. 1 OSD Configuration Interface

Figure 12.2 Copy Settings to Other Cameras

12.2 Configuring Privacy Mask

You are allowed to configure the four-sided privacy mask zones that cannot be viewed by the operator. ***Steps:***

1. Enter the Privacy Mask Settings interface. Menu > Camera > Privacy Mask
2. Select the camera to set privacy mask.
3. Click the checkbox of **Enable Privacy Mask** to enable this feature.
4. Use the mouse to draw a zone on the window. The zones will be marked with different frame colors. Up to 4 privacy mask zones can be configured, and the size of each

area can be adjusted.

5. The configured privacy mask zones on the window can be cleared by clicking the corresponding Clear Zone1-4 icons on the right side of the window, or click **Clear All** too clear all zones.
6. You can click the **Copy** button to copy the privacy mask settings of the current camera to other cameras. Please refer to step 7 of Section *12.1 Configuring OSD Settings.*
7. Click the **Apply** button to save the settings.

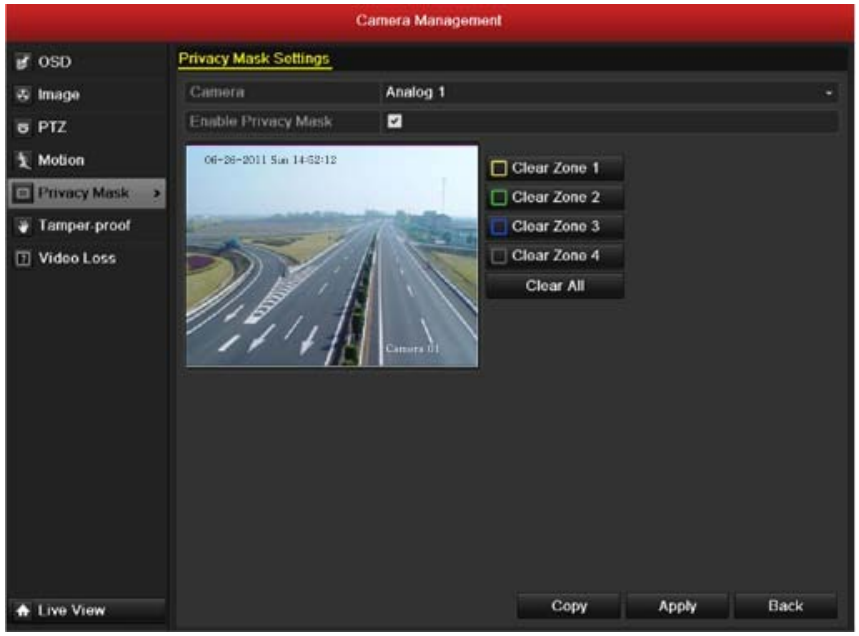


Figure 12.3 Privacy Mask Settings Interface

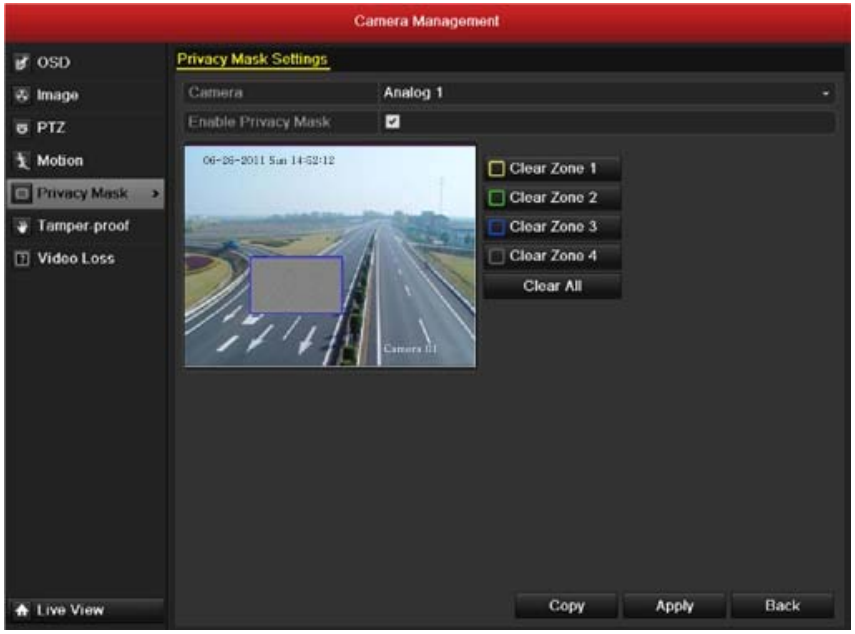


Figure 12. 4 Set Privacy Mask Area

12.3 Configuring Video Parameters

Steps:

1. Enter the Image Settings interface. Menu -> Camera -> Image
2. Select the camera to set image parameters.
3. Select the mode from the dropdown list of **Mode**. Five modes are selectable: Standard, Indoor, Dim Light, Outdoor and Customize.
4. When the mode is selected to Customize, you can adjust the video parameters, including Brightness, Contrast, Saturation and Hue, as shown in Figure 12.6.
5. You can click the **Copy** button to copy the image settings of the current camera to other cameras. Please refer to step 7 of Section *12.1 Configuring OSD Settings.*
6. Click the **Apply** button to save the settings.

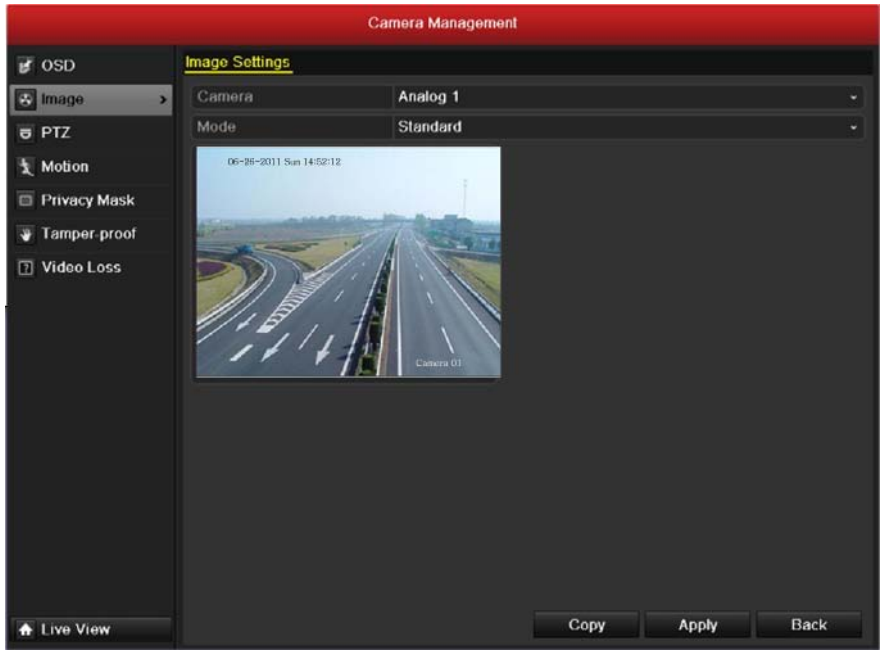


Figure 12.5 Image Settings Interface

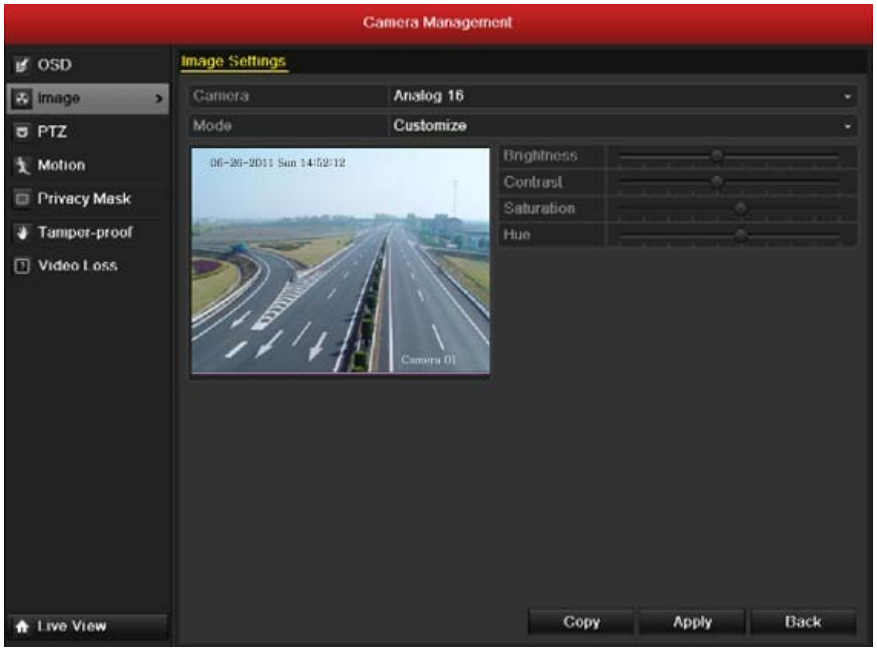


Figure 12.6 Configure Customized Image Settings

13 HDD Management

13.1 Initializing HDDs

A newly installed hard disk drive (HDD) must be initialized before it can be used with your DVR.

Steps:

1. Enter the HDD Information interface. Menu > HDD>General.
2. Select HDD to be initialized.
3. Click the Init button.
4. Select the **OK** button to start initialization.
5. After the HDD has been initialized, the status of the HDD will change from *Uninitialized* to *Normal*.

Note: Initializing the HDD will erase all data on it.

Figure 13.1 HDD Information Interface

Figure 13.2 HDD Status Changes to Normal

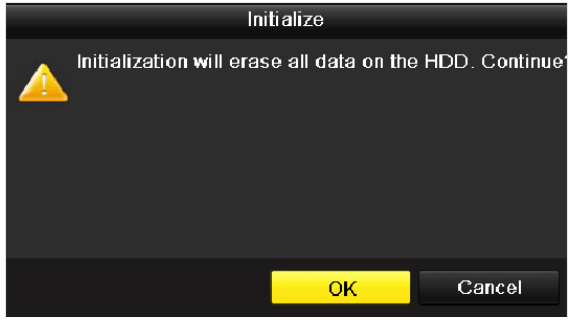


Figure 13.3 Confirm Initialization

Figure 13. 4 Start Initialization

13.2 Managing Network HDD

You can add the allocated NAS or disk of IP SAN to DVR, and use it as network HDD. ***Steps:***

1. Enter the HDD Information interface. Menu > HDD>General.
2. Click the **Add** button to enter the Add NetHDD interface, as shown in Figure 13.6.
3. Add the allocated NetHDD.
4. Select the type to NAS or IP SAN.

5. Configure the NAS or IP SAN settings.

• **Add NAS disk:**

1) Enter the NetHDD IP address in the text field.
2) Enter the NetHDD Directory in the text field.
3) Click the **OK** button to add the configured NAS disk.

Note: Up to 8 NAS disks can be added.

• **Add IP SAN:**

1) Enter the NetHDD IP address in the text field.
2) Click the **Search** button to the available IP SAN disks.
3) Select the IP SAN disk from the list shown below.
4) Click the **OK** button to add the selected IP SAN disk.

Note: Up to 1 IP SAN disk can be added.

6. After having successfully added the NAS or IP SAN disk, return to the HDD Information menu. The added NetHDD will be displayed in the list.

Note: If the added NetHDD is uninitialized, please select it and click the **Init** button for initialization.

Figure 13.5 HDD Information Interface

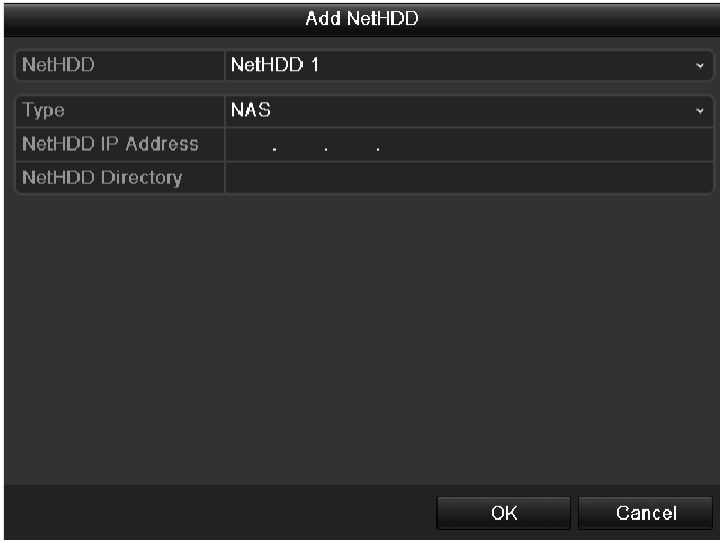


Figure 13.6 HDD Information Interface

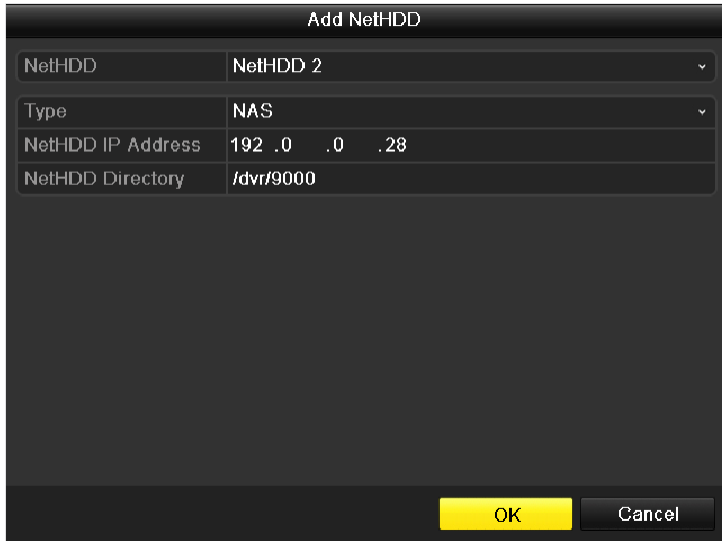


Figure 13.7 Add NAS Disk

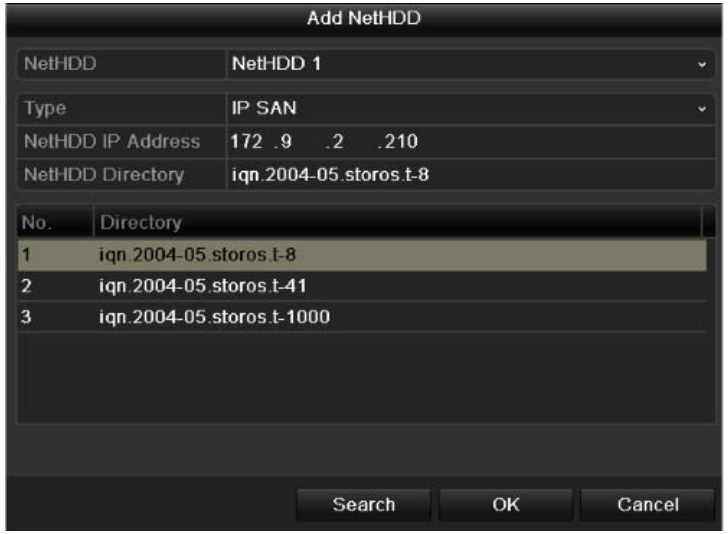


Figure 13. 8 Add IP SAN Disk

Figure 13.9 Initialize Added NetHDD

13.3 Managing eSATA

When there is an external eSATA device connected to DVR, you can configure eSATA for the use of Record/Capture or Export, and you can manage the eSATA in the DVR.
Steps:

1. Enter the Advanced Record Settings interface. Menu > Record>Advanced
2. Select the eSATA type to Export or Record/Capture from the dropdown list of **eSATA**.

   Export: use the eSATA for backup. Refer to *Backup using eSATA HDDs* in *Section 8.1.2 Backing up by Normal Video Search* for operating instructions.

   Record/Capture: use the eSATA for record/capture. Refer to the following steps for operating instructions.
3. When the eSATA type is selected to Record/Capture, enter the HDD Information interface. Menu > HDD>General
4. Edit the property of the selected eSATA, or initialize it is required.

Note: Two storage modes can be configured for the eSATA when it is used for Record/Capture.

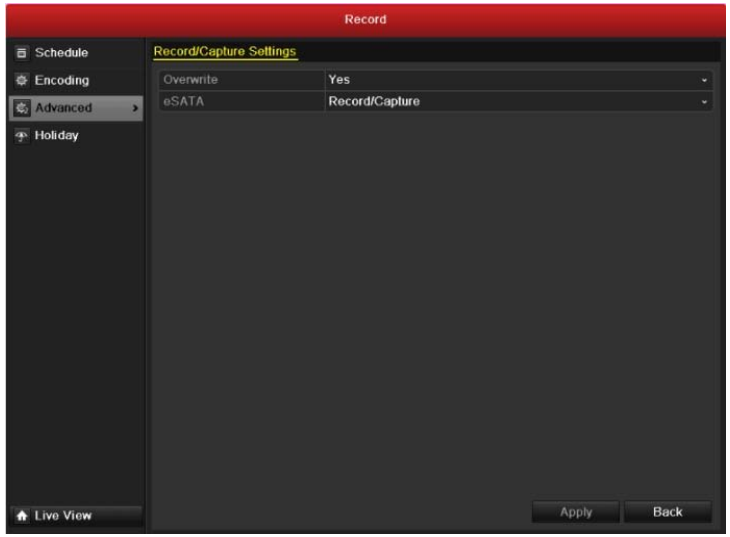


Figure 13.10 Set eSATA Mode

Figure 13.11 Initialize Added NetHDD

13.4 Manage HDD Group

13.4.1 Setting HDD Groups

Multiple HDDs can be managed in groups. Video from specified channels can be recorded onto a particular HDD group through HDD settings. ***Steps:***

1. Enter the Storage Mode interface. Menu > HDD > Advanced
2. Set the **Mode** to Group, as shown in Figure 13.12.

3. Click the **Apply** button and the following Attention box will pop up.
4. Click the **Yes** button to reboot the device to activate the changes.
5. After reboot of device, enter the HDD Information interface. Menu > HDD > General
6. Select HDD from the list and click the icon to enter the Local HDD Settings interface, as shown in Figure 13.14.
7. Select the Group number for the current HDD. The default group No. for each HDD is 1.
8. Click the **OK** button to confirm the settings.
9. In the pop-up Attention box, click the **Yes** button to finish the settings.

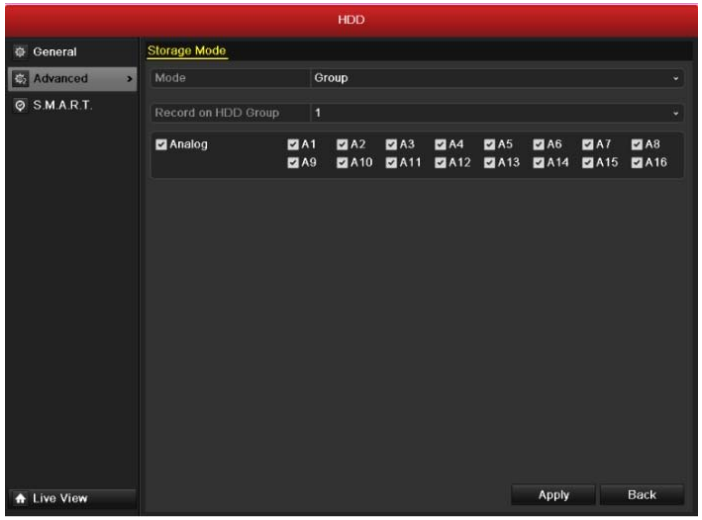


Figure 13.12 Storage Mode Interface

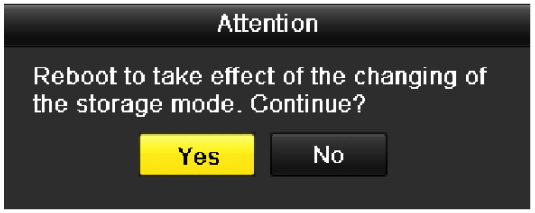


Figure 13.13 Attention for Reboot

Figure 13.14 Local HDD Settings Interface

Figure 13. 15 Confirm HDD Group Settings

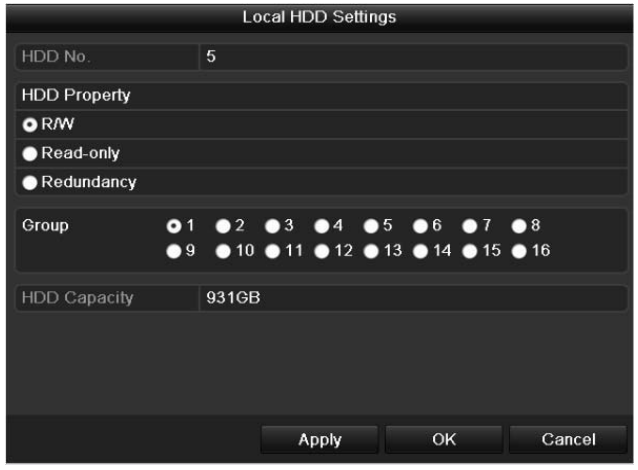


Figure 13.16 Set HDD Property

13.4.2 Setting HDD Property

The HDD property can be set to redundancy, read-only or read/write (R/W). Before setting the HDD property, please set the storage mode to Group (refer to step1-4 of Chapter 10.4.1 Setting HDD Groups). A HDD can be set to read-only to prevent important recorded files from being overwritten when the HDD becomes full in overwrite recording mode. When the HDD property is set to redundancy, the video can be recorded both onto the redundancy HDD and the R/W HDD simultaneously so as to ensure high security and reliability of video data.

Steps:

1. Enter the HDD Information interface. Menu > HDD > General
2. Select HDD from the list and click the icon to enter the Local HDD Settings interface as shown in Figure 13.16.
3. Set the HDD property to R/W, Read-only or Redundancy.
4. Click the **OK** button to save the settings and exit the interface.
5. In the HDD Information menu, the HDD property will be displayed in the list.

Note: At least 2 hard disks must be installed on your DVR when you want to set a HDD to Redundancy, and there is one HDD with R/W property.

13.5 Configuring Quota Mode

Each camera can be configured with allocated quota for the storage of recorded files or captured pictures. ***Steps:***

1. Enter the Storage Mode interface. Menu > HDD > Advanced
2. Set the **Mode** to Quota, as shown in Figure 13.17. The DVR must be rebooted to enable the changes to take effect.
3. Select a camera for which you want to configure quota.
4. Enter the storage capacity in the text fields of **Max. Record Capacity (GB)** and **Max. Picture Capacity (GB)**, as shown in Figure 13.18.
5. You can copy the quota settings of the current camera to other cameras if required. Click the **Copy** button to enter the Copy Camera menu, as shown in Figure 13.19.
6. Select the camera (s) to be configured with the same quota settings. You can also click the checkbox of Analog to select all cameras.
7. Click the **OK** button to finish the Copy settings and back to the Storage Mode interface.
8. Click the **Apply** button to apply the settings.

Note: If the quota capacity is set to *0*, then all cameras will use the total capacity of HDD for record and picture capture.

Figure 13.17 Storage Mode Settings Interface

Figure 10.18 Configure Record/Picture Quota

Figure 13.19 Copy Settings to Other Camera(s)

13.6 Checking HDD Status

You may check the status of the installed HDDs on DVR so as to take immediate check and maintenance in case of HDD failure.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the HDD Information interface. Menu > HDD>General
2. Check the status of each HDD which is displayed on the list, as shown in Figure 13.20.

Note: If the status of HDD is *Normal* or *Sleeping*, it works normally. If the status is *Uninitialized* or *Abnormal*, please initialize the HDD before use. And if the HDD initialization is failed, please replace it with a new one.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the System Information interface. Menu > Maintenance > System Info
2. Click the **HDD** tab to view the status of each HDD displayed on the list, as shown in Figure 13.21.

Figure 13.20 View HDD Status (1)

Figure 13.21 View HDD Status (2)

13.7 Checking S.M.A.R.T Information

The S.M.A.R.T. *(*Self-Monitoring, Analysis and Reporting Technology*)* is a monitoring system for HDD to detect and report on various indicators of reliability in the hopes of anticipating failures. ***Steps:***

1. Enter the S.M.A.R.T Settings interface. Menu > HDD > S.M.A.R.T.

2. Check the checkbox of **Enable S.M.A.R.T**.
3. Select the HDD to view its S.M.A.R.T information list, as shown in Figure 13.22.

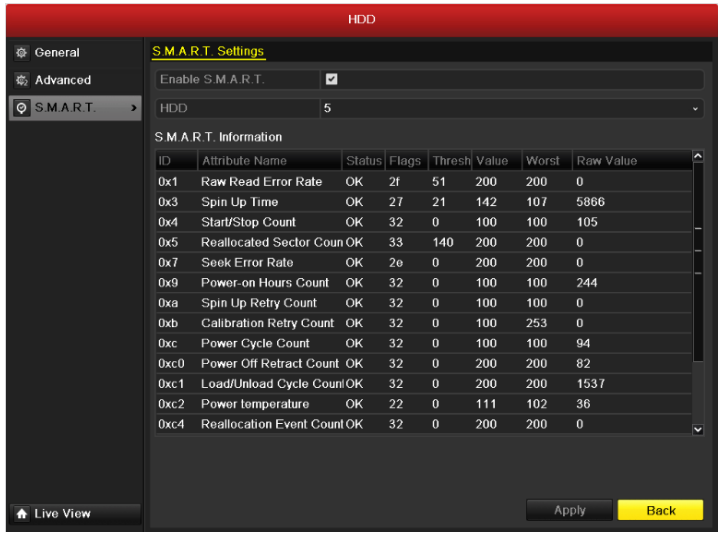

HDD
General
Advanced
S.M.A.R.T.
S.M.A.R.T. Settings
Enable S.M.A.R.T.
HDD
5
S.M.A.R.T. Information
ID Attribute Name Status Flags Thresh Value Worst Raw Value
0x1 Raw Read Error Rate OK 2f 51 200 200 0
0x3 Spin Up Time OK 27 21 142 107 5866
0x4 Start/Stop Count OK 32 0 100 100 105
0x5 Reallocated Sector Coun OK 33 140 200 200 0
0x7 Seek Error Rate OK 2e 0 200 200 0
0x9 Power-on Hours Count OK 32 0 100 100 244
0xa Spin Up Retry Count OK 32 0 100 100 0
0xb Calibration Retry Count OK 32 0 100 253 0
0xc Power Cycle Count OK 32 0 100 100 94
0xc0 Power Off Retract Count OK 32 0 200 200 82
0xc1 Load/Unload Cycle Coun OK 32 0 200 200 1537
0xc2 Power temperature OK 22 0 111 102 36
0xc4 Reallocation Event Count OK 32 0 200 200 0
Live View
Apply
Back
Figure 13.22 S.M.A.R.T Settings Interface

Figure 10.23 Configure HDD Error Alarm

13.8 Configuring HDD Error Alarms

You can configure the HDD error alarms when the HDD status is *Uninitialized* or *Abnormal*. ***Steps:***

1. Enter the Exception interface. Menu > Configuration > Exceptions
2. Select the Exception Type to **HDD Error** from the dropdown list.
3. Click the checkbox(s) below to select the HDD error alarm type (s), as shown in Figure 13.23. The alarm type can be selected to: Audio Warning, Notify Surveillance Center, Send Email and Trigger Alarm Output. Please refer to *Section 9.6 Setting Alarm Response Actions*.
4. When the Trigger Alarm Output is selected, you can also select the alarm output to be triggered from the list below.
5. Click the **Apply** button to save the settings.

14 DVR Management and Maintenance

14.1 Viewing System Information

14.1.1 Viewing Device Information

Steps:

1. Enter the System Information interface. Menu > Maintenance > System Info
2. Click the **Device Info** tab to enter the Device Information menu to view the device name, model, serial No., firmware version and encode version, as shown in Figure 14.1.

Figure 14.1 Device Information Interface

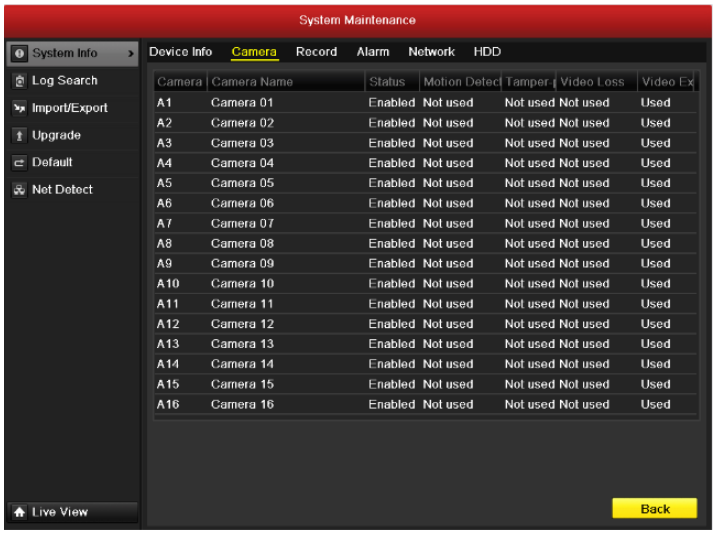

System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Live View
Device Info
Camera
Record
Alarm
Network
HDD
Camera
Camera Name
Status
Motion Detec
Tamper-
Video Loss
Video Ex
A1 Camera 01 Enabled Not used Not used Not used Used
A2 Camera 02 Enabled Not used Not used Not used Used
A3 Camera 03 Enabled Not used Not used Not used Used
A4 Camera 04 Enabled Not used Not used Not used Used
A5 Camera 05 Enabled Not used Not used Not used Used
A6 Camera 06 Enabled Not used Not used Not used Used
A7 Camera 07 Enabled Not used Not used Not used Used
A8 Camera 08 Enabled Not used Not used Not used Used
A9 Camera 09 Enabled Not used Not used Not used Used
A10 Camera 10 Enabled Not used Not used Not used Used
A11 Camera 11 Enabled Not used Not used Not used Used
A12 Camera 12 Enabled Not used Not used Not used Used
A13 Camera 13 Enabled Not used Not used Not used Used
A14 Camera 14 Enabled Not used Not used Not used Used
A15 Camera 15 Enabled Not used Not used Not used Used
A16 Camera 16 Enabled Not used Not used Not used Used
Back

Figure 14.2 Camera Information Interface

14.1.2 Viewing Camera Information

Steps:

1. Enter the System Information interface. Menu > Maintenance > System Info
2. Click the **Camera** tab to enter the Camera Information menu to view the status of each camera, as shown in Figure 14.2.

14.1.3 Viewing Record Information

Steps:

1. Enter the System Information interface. Menu > Maintenance > System Info
2. Click the **Record** tab to enter the Record Information menu to view the recording status encoding parameters of each camera, as shown in Figure 14.3.

14.1.4 Viewing Alarm Information

Steps:

1. Enter the System Information interface. Menu > Maintenance > System Info

2. Click the **Alarm** tab to enter the Alarm Information menu to view the alarm information, as shown in Figure 14.4.

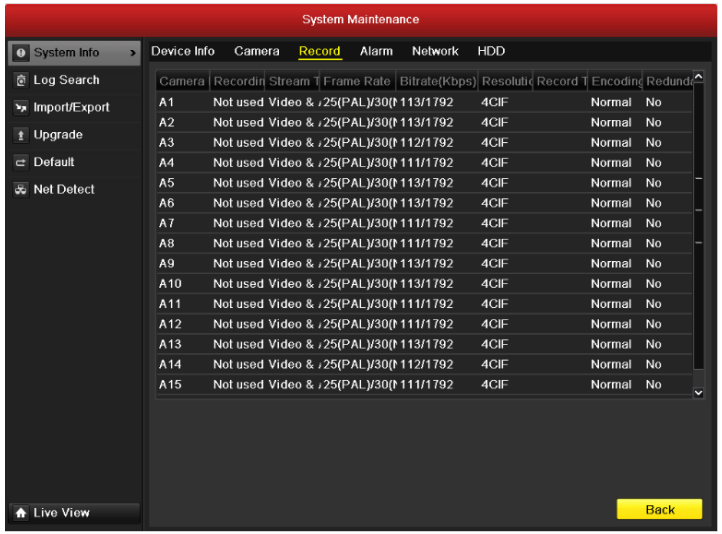

System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Live View
Device Info
Camera
Record
Alarm
Network
HDD
Camera
Recordin
Stream T
Frame Rate
Bitrate(Kbps)
Resolutio
Record T
Encoding
Redund
A1 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A2 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A3 Not used Video & 25(PAL)/30(N 112/1792 4CIF Normal No
A4 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A5 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A6 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A7 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A8 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A9 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A10 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A11 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A12 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
A13 Not used Video & 25(PAL)/30(N 113/1792 4CIF Normal No
A14 Not used Video & 25(PAL)/30(N 112/1792 4CIF Normal No
A15 Not used Video & 25(PAL)/30(N 111/1792 4CIF Normal No
Back

Figure 12.3 Record Information Interface

Figure 14.4 Alarm Information Interface

14.1.5 Viewing Network Information

Steps:

1. Enter the System Information interface. Menu > Maintenance > System Info
2. Click the **Network** tab to enter the Network Information menu to view the network information, as shown in Figure 14.5.

14.1.6 Viewing HDD Information

Steps:
1. Enter the System Information interface. Menu > Maintenance > System Info
2. Click the **HDD** tab to enter the HDD Information menu to view the HDD status, free space, property, etc., as shown in Figure 14.6.

Figure 14.5 Network Information Interface

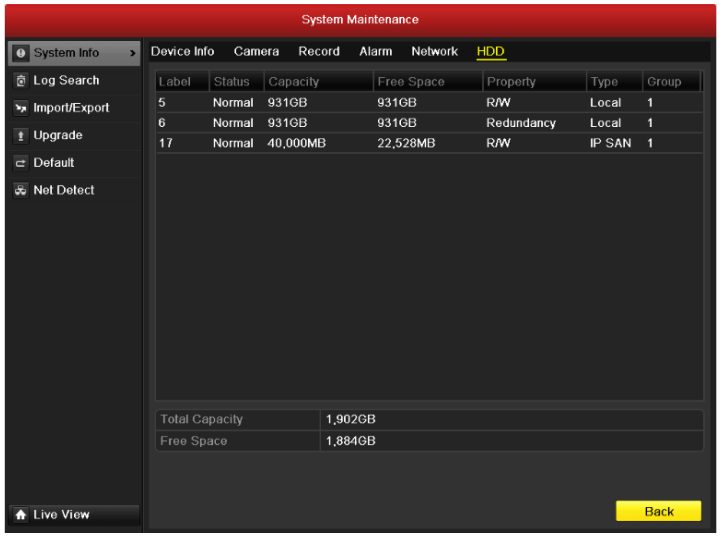


Figure 12.6 HDD Information Interface

14.2 Searching & Export Log Files

The operation, alarm, exception and information of the DVR can be stored in log files, which can be viewed and exported at any time.
Steps:

1. Enter the Log Search interface. Menu > Maintenance > Log Search
2. Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.
3. Click the **Search** button to start search log files.
4. The matched log files will be displayed on the list shown below. Up to 2000 log files can be displayed each time.
5. You can click the button of each log or double click it to view its detailed information, as shown in Figure 14.9. And you can also click the button to view the related video files if available.
6. If you want to export the log files, click the **Export** button to enter the Export menu, as shown in Figure 14.10.
7. Select the backup device from the dropdown list of **Device Name**.
8. Click the **Export** to export the log files to the selected backup device.

You can click the **New Folder** button to create new folder in the backup device, or click the **Format** button to format the backup device before log export.

Note:
1) Please connect the backup device to DVR before operating log export.
2) The log files exported to the backup device are named by exporting time, e.g. *20110514124841logBack.txt*.

Figure 14.7 Log Search Interface

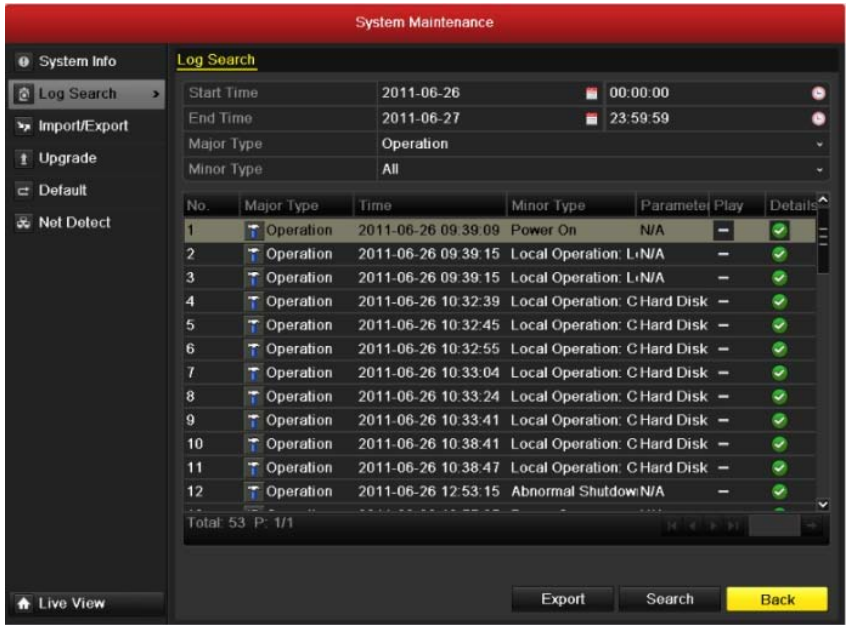

System Maintenance
System Info
Log Search
Import/Export
Upgrade
Default
Net Detect
Log Search
Start Time 2011-06-26 00:00:00
End Time 2011-06-27 23:59:59
Major Type Operation
Minor Type All
No. Major Type Time Minor Type Parameter Play Details
1 Operation 2011-06-26 09:39:09 Power On N/A
2 Operation 2011-06-26 09:39:15 Local Operation: L N/A
3 Operation 2011-06-26 09:39:15 Local Operation: L N/A
4 Operation 2011-06-26 10:32:39 Local Operation: C Hard Disk
5 Operation 2011-06-26 10:32:45 Local Operation: C Hard Disk
6 Operation 2011-06-26 10:32:55 Local Operation: C Hard Disk
7 Operation 2011-06-26 10:33:04 Local Operation: C Hard Disk
8 Operation 2011-06-26 10:33:24 Local Operation: C Hard Disk
9 Operation 2011-06-26 10:33:41 Local Operation: C Hard Disk
10 Operation 2011-06-26 10:38:41 Local Operation: C Hard Disk
11 Operation 2011-06-26 10:38:47 Local Operation: C Hard Disk
12 Operation 2011-06-26 12:53:15 Abnormal Shutdow N/A
Total: 53 P: 1/1
Live View
Export Search Back

Figure 14.8 Log Search Results

Figure 14.9 Log Details

Export
Device Name USB1-1
Refresh
Name Size Type Edit Date Delete Play
FOUND.000 Folder 2010-09-17 11:19:04
FOUND.001 Folder 2011-04-02 17:45:24
RECYCLER Folder 2010-08-04 17:35:20
Work Folder 2011-06-21 17:55:42
Book1.xls 23KB File 2011-05-26 18:32:14
Compare Excel.exe 129KB File 2011-04-20 09:51:42
Recycled 4KB File 2011-02-22 14:16:18
bond0_201106241720 1,024KB File 2011-06-24 17:20:48
digicap.mav 19,790KB File 2011-06-23 09:05:20
Free Space 180MB
New Folder Format Export Cancel

Figure 14.10 Export Log Files

14.3 Importing/Exporting Configuration Files

The configuration files of the DVR can be exported to local device for backup; and the configuration files of one DVR can be imported to multiple DVR devices if they are to be configured with the same parameters.

Steps:

1. Enter the Import/Export Configuration File interface. Menu > Maintenance > Import/Export
2. Click the **Export** button to export configuration files to the selected local backup device.
3. To import a configuration file, select the file from the selected backup device and click the **Import** button. After the import process is completed, you must reboot the DVR.

Note: After having finished the import of configuration files, the device will reboot automatically.

Figure 14.11 Import/Export Config File

Figure 14.12 Local Upgrade Interface

14.4 Upgrading System

The firmware on your DVR can be upgraded by local backup device or remote FTP server.

14.4.1 Upgrading by Local Backup Device

Steps:

1. Connect your DVR with a local backup device where the update firmware file is located.

2. Enter the Upgrade interface. Menu > Maintenance > Upgrade
3. Click the **Local Upgrade** tab to enter the local upgrade menu, as shown in Figure 14.12.
4. Select the update file from the backup device.
5. Click the **Upgrade** button to start upgrading.
6. After the upgrading is complete, reboot the DVR to activate the new firmware.

14.4.2 Upgrading by FTP

Before you start, please configure PC (running FTP server) and DVR to the same Local Area Network. Run the 3rd-party TFTP software on the PC and copy the firmware into the root directory of TFTP.

Steps:

1. Enter the Upgrade interface. Menu -> Maintenance -> Upgrade
2. Click the **FTP** tab to enter the local upgrade interface, as shown in Figure 14.13.
3. Enter the FTP Server Address in the text field.
4. Click the **Upgrade** button to start upgrading.
5. After the upgrading is complete, reboot the DVR to activate the new firmware.

14.5 Restoring Default Settings

Steps:

1. Enter the Default interface. Menu > Maintenance > Default

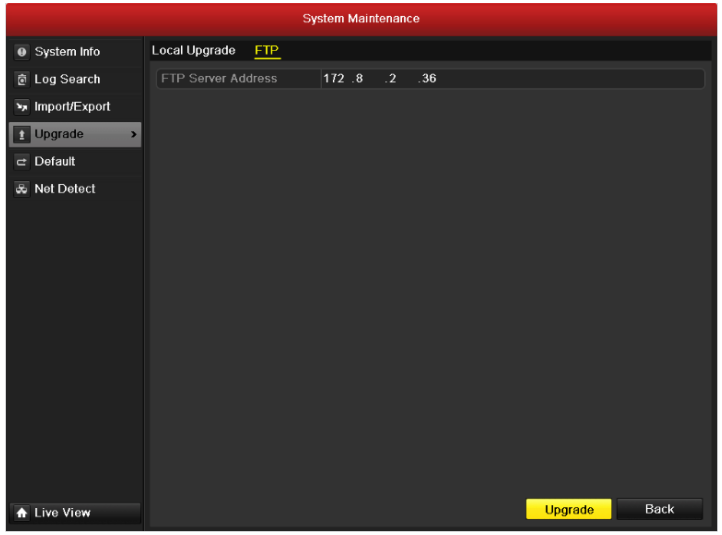


Figure 14.13 FTP Upgrade Interface

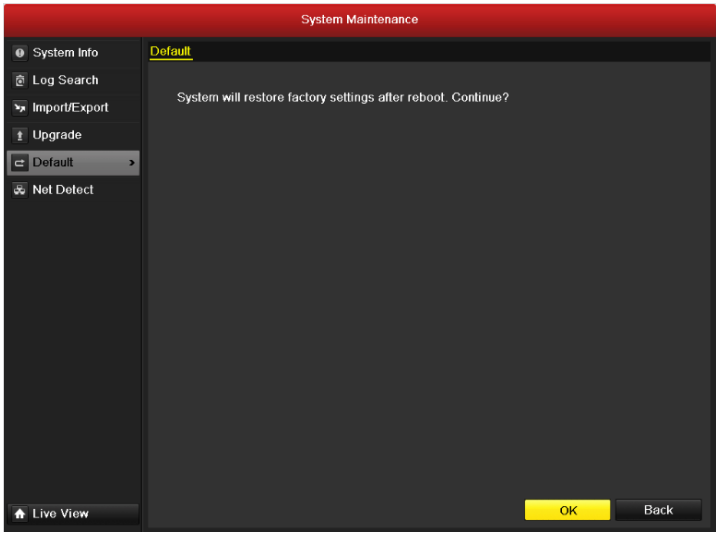


Figure 14.14 Restore Factory Default

2. Click the **OK** button to restore the default settings.

Note: Except the network parameters (including IP address, subnet mask, gateway, MTU, default route and server port), all other parameters of the device will be restored to factory default settings.

14.6 Configuring RS-232 Serial Port

The RS-232 port can be used in two ways:

• Parameters Configuration: Connect a PC to the DVR through the PC serial port. Device parameters can be configured by using software such as HyperTerminal. The serial port parameters must be the same as the DVR's when connecting with the PC serial port.
• Transparent Channel: Connect a serial device directly to the DVR. The serial device will be controlled remotely by the PC through the network and the protocol of the serial device.

Steps:

1. Enter the RS-232 Settings interface. Menu > Configuration > RS-232
2. Configure RS-232 parameters, including baud rate, data bit, stop bit, parity, flow control and usage.
3. Click the **Apply** button to save the settings.

Figure 14.15 RS-232 Settings Interface

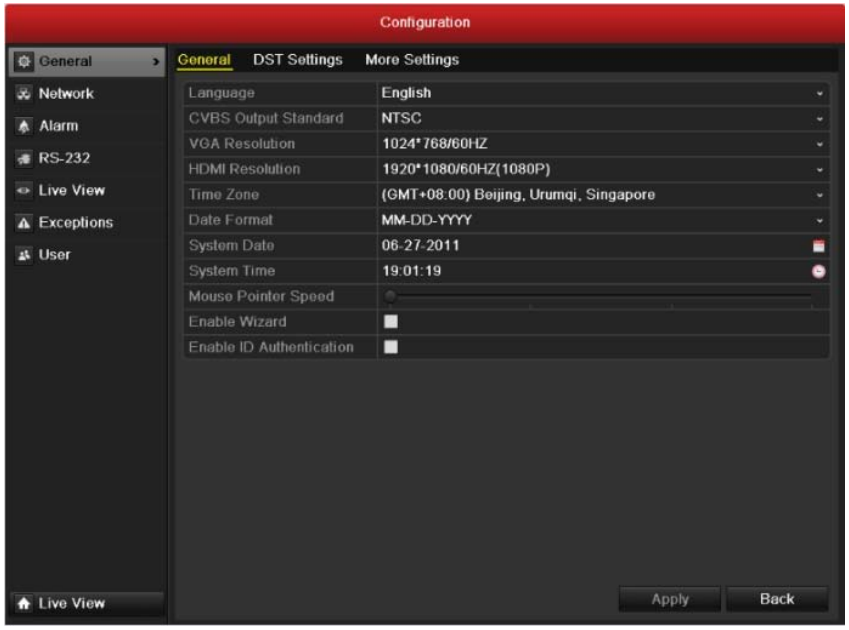


Figure 14.16 General Settings Interface

14.7 Configuring General Settings

You can configure the BNC output standard, VGA output resolution, mouse pointer speed through the Menu > Configuration > General interface. ***Steps:***

1. Enter the General Settings interface. Menu > Configuration > General
2. Select the **General** tab.
3. Configure the following settings:
   - **Language:** The default language used is *English*.
   - **CVBS Output Standard:** Select the CVBS output standard to NTSC or PAL, which must be the same with the video input standard.
   - **VGA Resolution:** Select the VGA output resolution, which must be the same with the resolution of the monitor screen.
   - **HDMI Resolution:** Select the HDMI resolution, which must be the same with the resolution of the monitor screen.
   - **Time Zone:** Select the time zone.
   - **Date Format:** Select the date format.
   - **System Date:** Select the system date.
   - **System Time:** Select the system time.
   - **Mouse Pointer Speed:** Set the speed of mouse pointer; 4 levels are configurable.
   - **Enable Wizard:** Enable/disable the Wizard when the device starts up.
   - **Enable Password:** Enable/disable the use of the login password.
4. Click the **Apply** button to save the settings.

14.8 Configuring More Settings

Steps:

1. Enter the General Settings interface. Menu > Configuration > General
2. Click the **More Settings** tab to enter the More Settings interface, as shown in Figure 14.17.

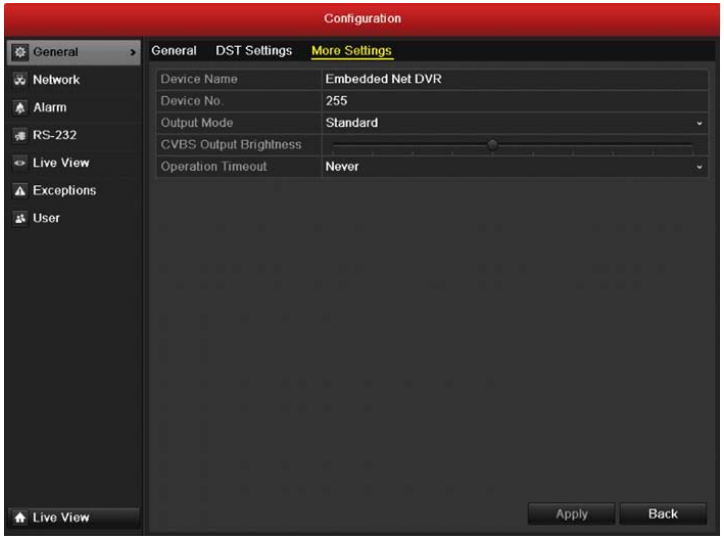


Figure 14.17 More Settings Interface

3. Configure the following settings:
   - **Device Name:** Edit the name of DVR.
   - **Device No.:** Edit the serial number of DVR. The Device No. can be set in the range of 1~255, and the default No. is 255.
   - **Output Mode:** Select the output mode to: Standard, Bright, Gentle or Vivid.
   - **CVBS Output Brightness:** Adjust the video output brightness.
   - **Operation Timeout:** Set timeout time for menu inactivity. E.g., when the timeout time is set to *5 Minutes*, then the system will exit from the current operation menu to live view screen after 5 minutes of menu inactivity.
4. Click the **Apply** button to save the settings.

14.9 Managing User Accounts

There is a default account in the DVR: *Administrator*. The *Administrator* user name is *admin* and the password is *12345*. The *Administrator* has the permission to add and delete user and configure user parameters.

14.9.1 Adding a User

Steps:

1. Enter the User Management interface. Menu -> Configuration- > User

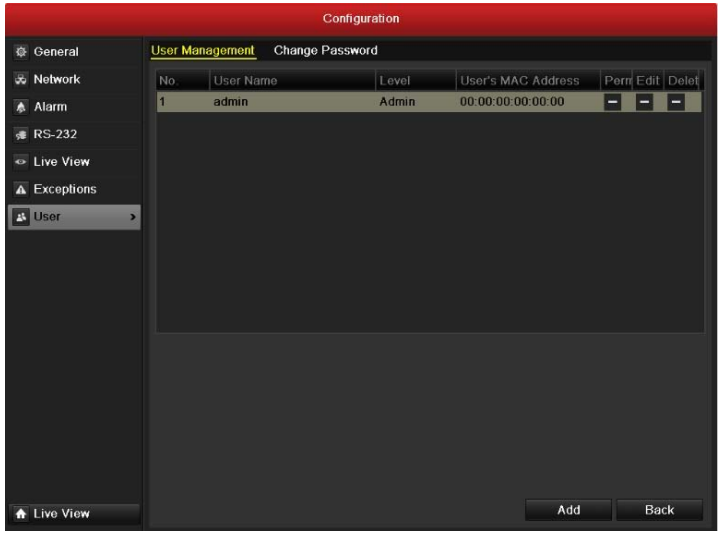


Figure 14.18 User Management Interface

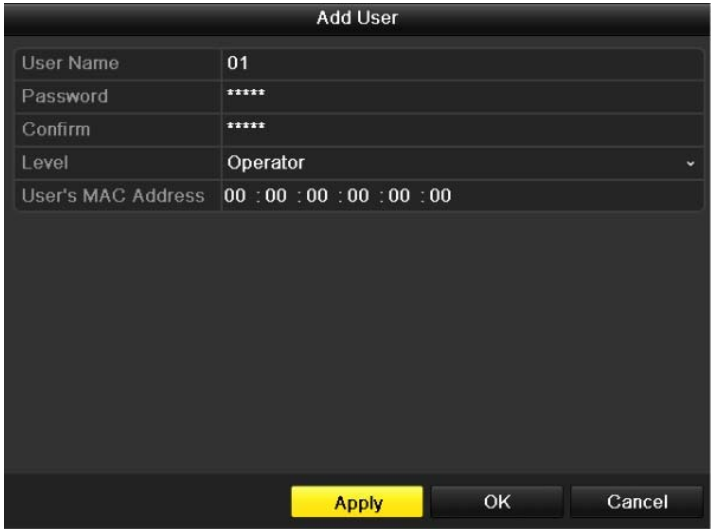


Figure 14.19 Add User Menu

2. Click the **Add** button to enter the Add User interface.

3. Enter the information for new user, including **User Name**, **Password**, **Level** and **User's MAC Address**.

Level: Set the user level to Operator or Guest. Different user levels have different operating permission.

- **Operator:** The *Operator* user level has permission of Two-way Audio in Remote Configuration and all operating permission in Camera Configuration.
- **Guest:** The Guest user has no permission of Two-way Audio in Remote Configuration and only has the local/remote playback in the Camera Configuration.
- **User's MAC Address:** The MAC address of the remote PC which logs onto the DVR. If it is configured and enabled, it only allows the remote user with this MAC address to access the DVR.

4. Click the **OK** button to save the settings and go back to the User Management interface. The added new user will be displayed on the list, as shown in Figure 14.20.

5. Select the user from the list and then click the button to enter the Permission settings interface, as shown in Figure 14.21.

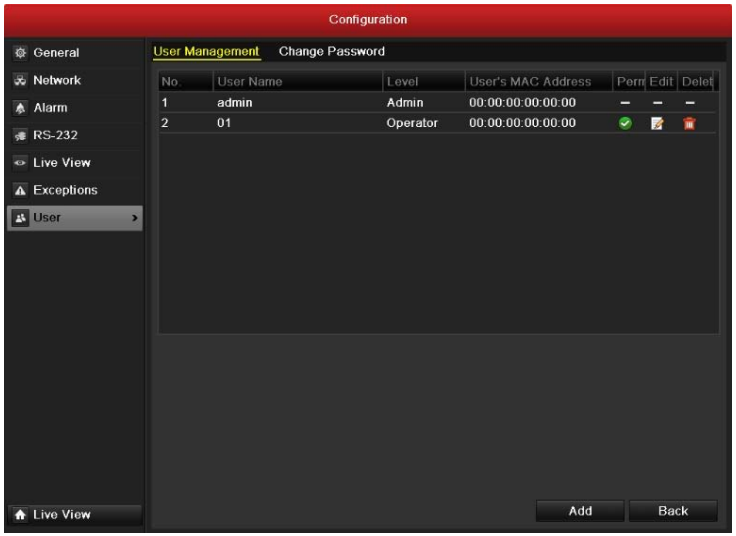


Figure 14.20 Added User Listed in User Management Interface

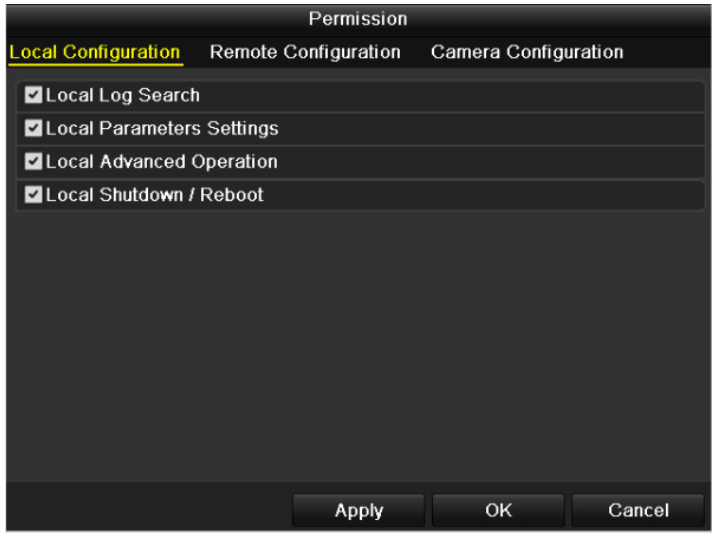


Figure 134.21 User Permission Settings Interface

6. Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

Local Configuration

- Local Log Search: Searching and viewing logs and system information of DVR.
- Local Parameters Settings: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Local Advanced Operation: Operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- Local Shutdown Reboot: Shutting down or rebooting the DVR.

Remote Configuration

- Remote Log Search: Remotely viewing logs that are saved on the DVR.
- Remote Parameters Settings: Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Remote Serial Port Control: Configuring settings for RS-232 and RS-485 ports.
- Remote Video Output Control: Sending remote button control signal.
- Two-Way Audio: Realizing two-way radio between the remote client and the DVR.
- Remote Alarm Control: Remotely arming (notify alarm and exception message to the remote client) and controlling the alarm output.
- Remote Advanced Operation: Remotely operating HDD management (initializing HDD, setting HDD property), upgrading system firmware, clearing I/O alarm output.
- Remote Shutdown/Reboot: Remotely shutting down or rebooting the DVR.**Camera Configuration**
- Remote Live View: Remotely viewing live video of the selected camera (s).
- Local Manual Operation: Locally starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Remote Manual Operation: Remotely starting/stopping manual recording, picture capturing and alarm output of the selected camera (s).
- Local Playback: Locally playing back recorded files of the selected camera (s).

- Remote Playback: Remotely playing back recorded files of the selected camera (s).
- Local PTZ Control: Locally controlling PTZ movement of the selected camera (s).
- Remote PTZ Control: Remotely controlling PTZ movement of the selected camera (s).
- Local Video Export: Locally exporting recorded files of the selected camera (s).

7. Click the **OK** button to save the settings and exit interface.

Note: Only the *admin* user account has the permission of restoring factory default parameters.

14.9.2 Deleting a User

Steps:

1. Enter the User Management interface. Menu > Configuration > User
2. Select the user to be deleted from the list, as shown in Figure 14.22.
3. Click the icon to delete the selected user.

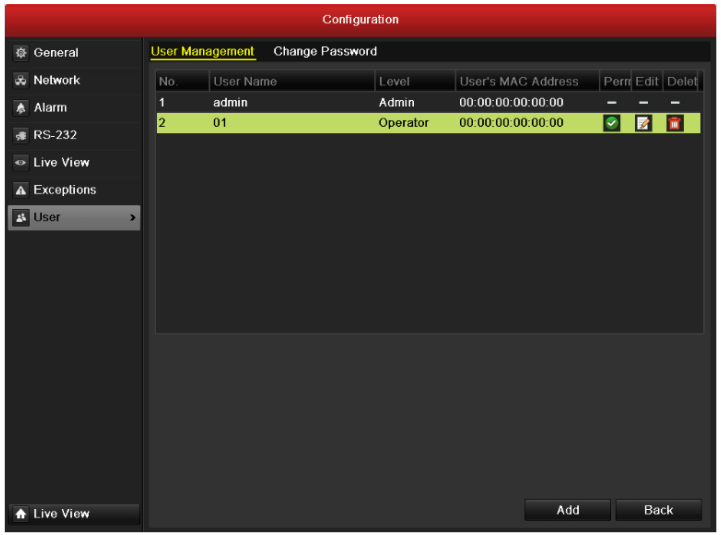


Figure 14.22 Delete a User

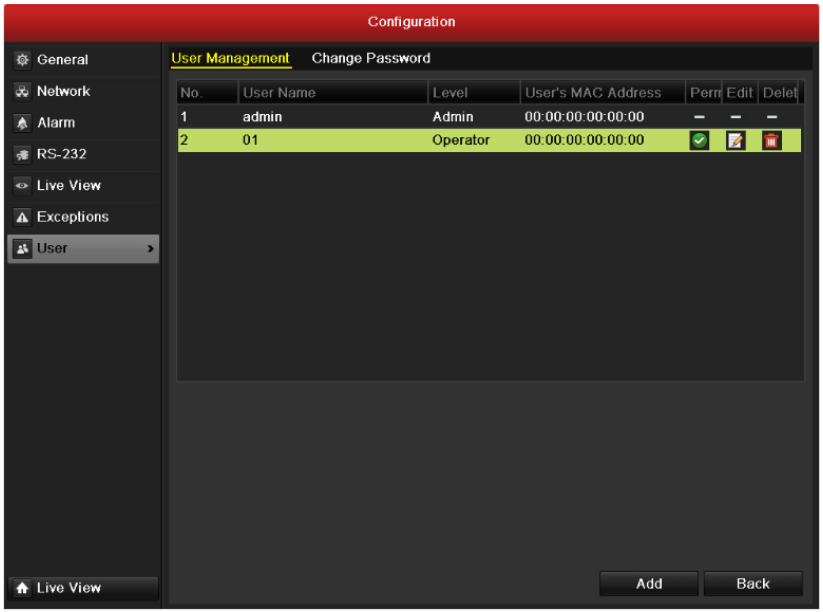


Figure 14.23 Edit a User

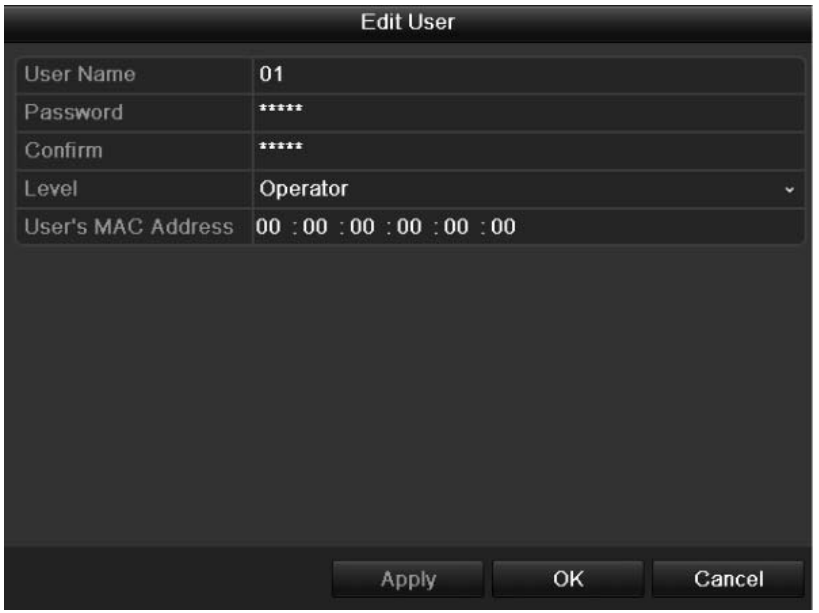


Figure 14.24 Edit User Interface

14.9.3 Editing a User

Steps:

1. Enter the User Management interface. Menu -> Configuration -> User
2. Select the user to be edited from the list, as shown in Figure 14.23.
3. Click the icon to enter the Edit User interface, as shown in Figure 14.24.
4. Edit the user information, including user name, password, level and MAC address. Click the **OK** button to save the settings and exit the menu.

14.9.4 Changing Password of Admin

The password of the Admin user account can be changed in the User Management menu. ***Steps:***

1. Enter the User Management interface. Menu -> Configuration -> User.
2. Click the **Change Password** tab to enter the Change Password menu, as shown in Figure 14.25.
3. Enter the old password, new password and confirm password on the menu. Click the **Save** button to save the changes.

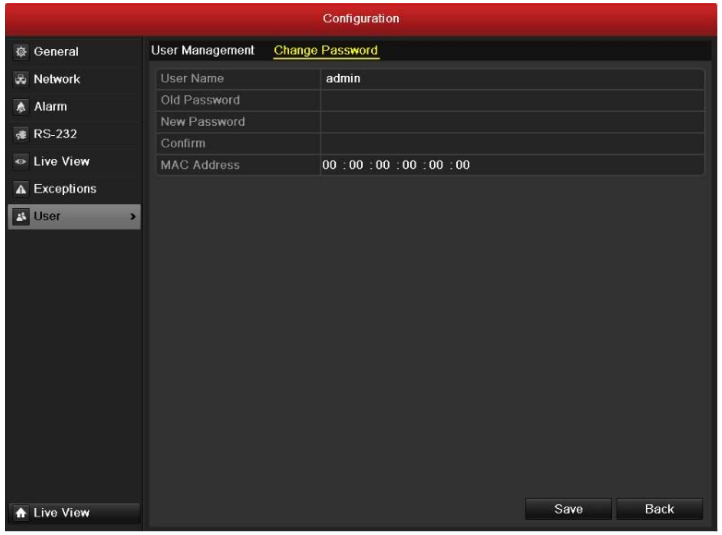


Figure 14.25 Change Password

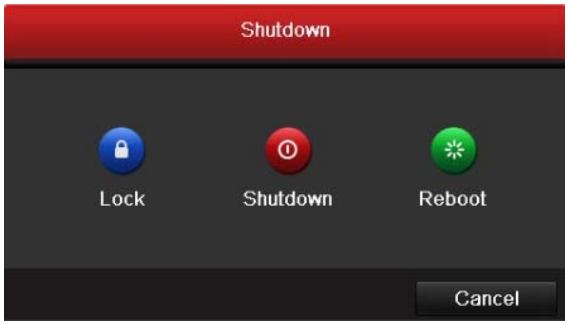


Figure 14.26 Shutdown

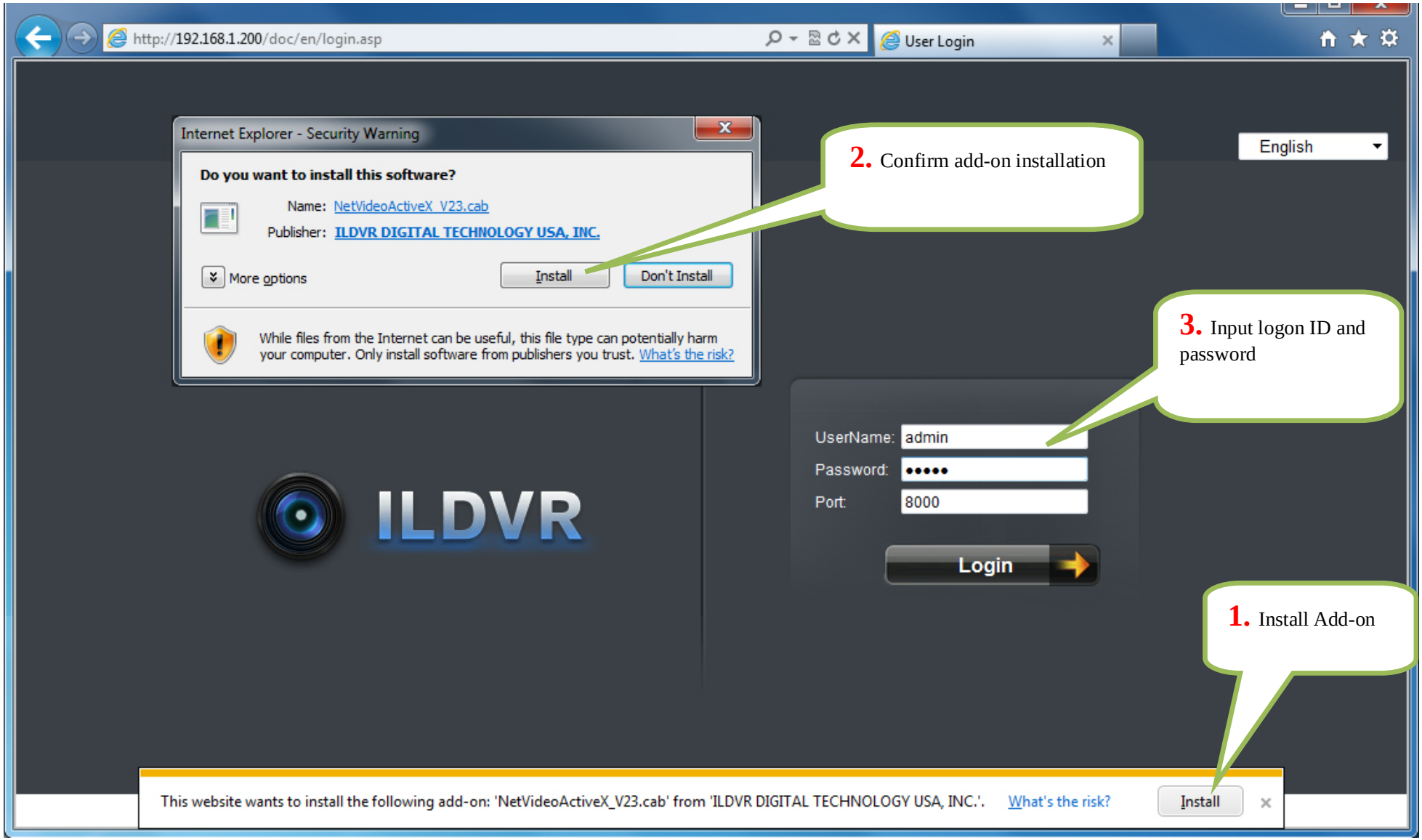
14.10 Locking/Shutting down/Rebooting Device

Steps:

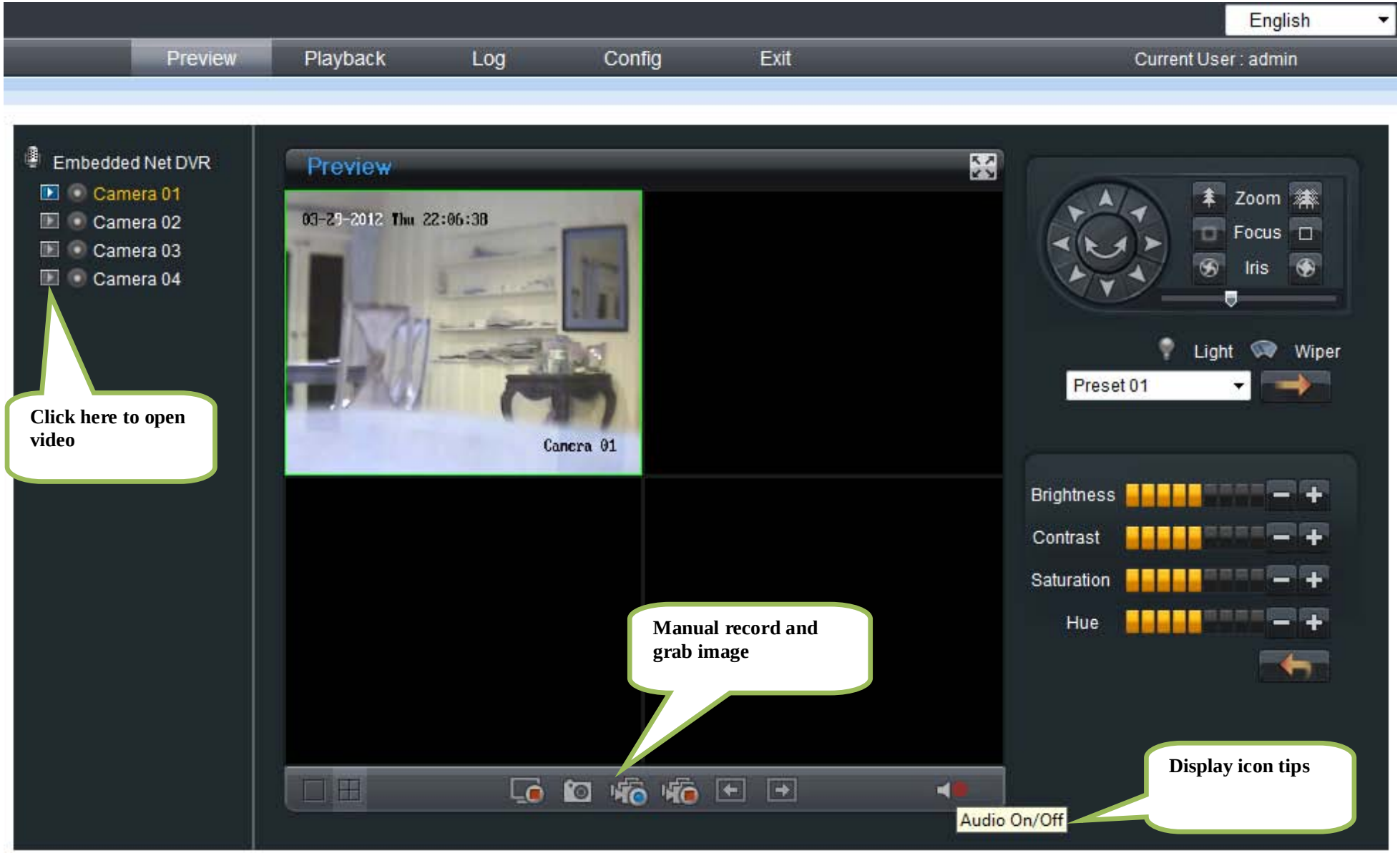
1. Enter the Shutdown interface. Menu > Shutdown
2. Click the **Lock** button to lock the device, or Click the **Shutdown** button to shut down the device, or Click the **Reboot** button to reboot the device.

15 IE Web Client

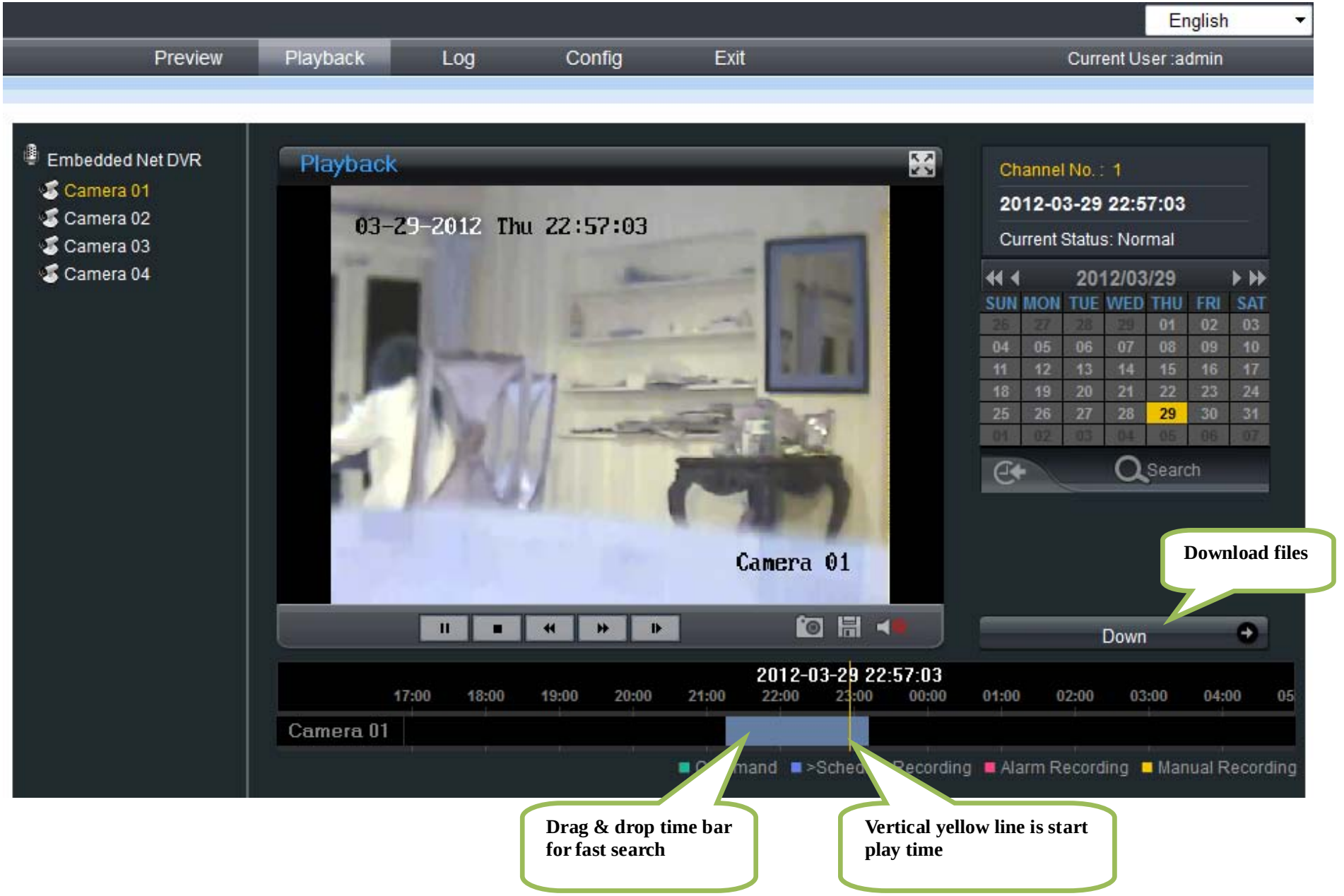
NetDVR has built in web server. You can use Internet Explorer directly login to IP camera by input camera's IP address or domain name. At first time connecting to IP camera, you will be prompted to install ActiveX Control (Add-on). Refer to following illustration.

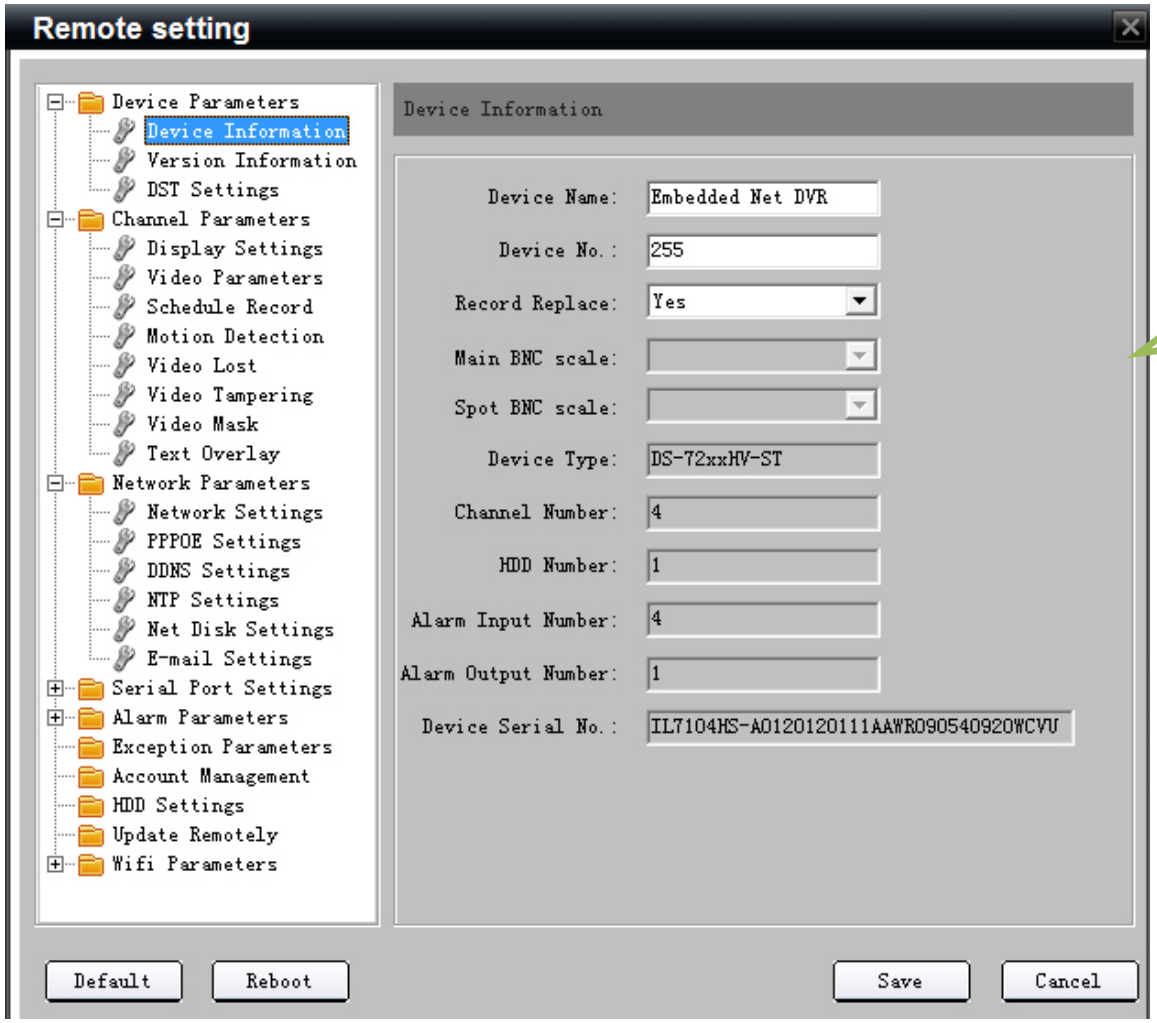

http://192.168.1.200/doc/en/login.asp
User Login
Internet Explorer - Security Warning
Do you want to install this software?
Name: NetVideoActiveX_V23.cab
Publisher: ILDVR DIGITAL TECHNOLOGY USA, INC.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?
2. Confirm add-on installation
English
3. Input logon ID and password
UserName: admin
Password: •••••
Port: 8000
Login
ILDVR
1. Install Add-on
This website wants to install the following add-on: 'NetVideoActiveX_V23.cab' from 'ILDVR DIGITAL TECHNOLOGY USA, INC.'.
What's the risk?
Install

In live preview interface, pause your mouse cursor on the icons will display tips. You can click the record button to start video recording or click capture button to grab a picture, the video and image will be saved in local computer disk drive. Please enter “Config” interface to check or modify the file saving path.



Playback Interface

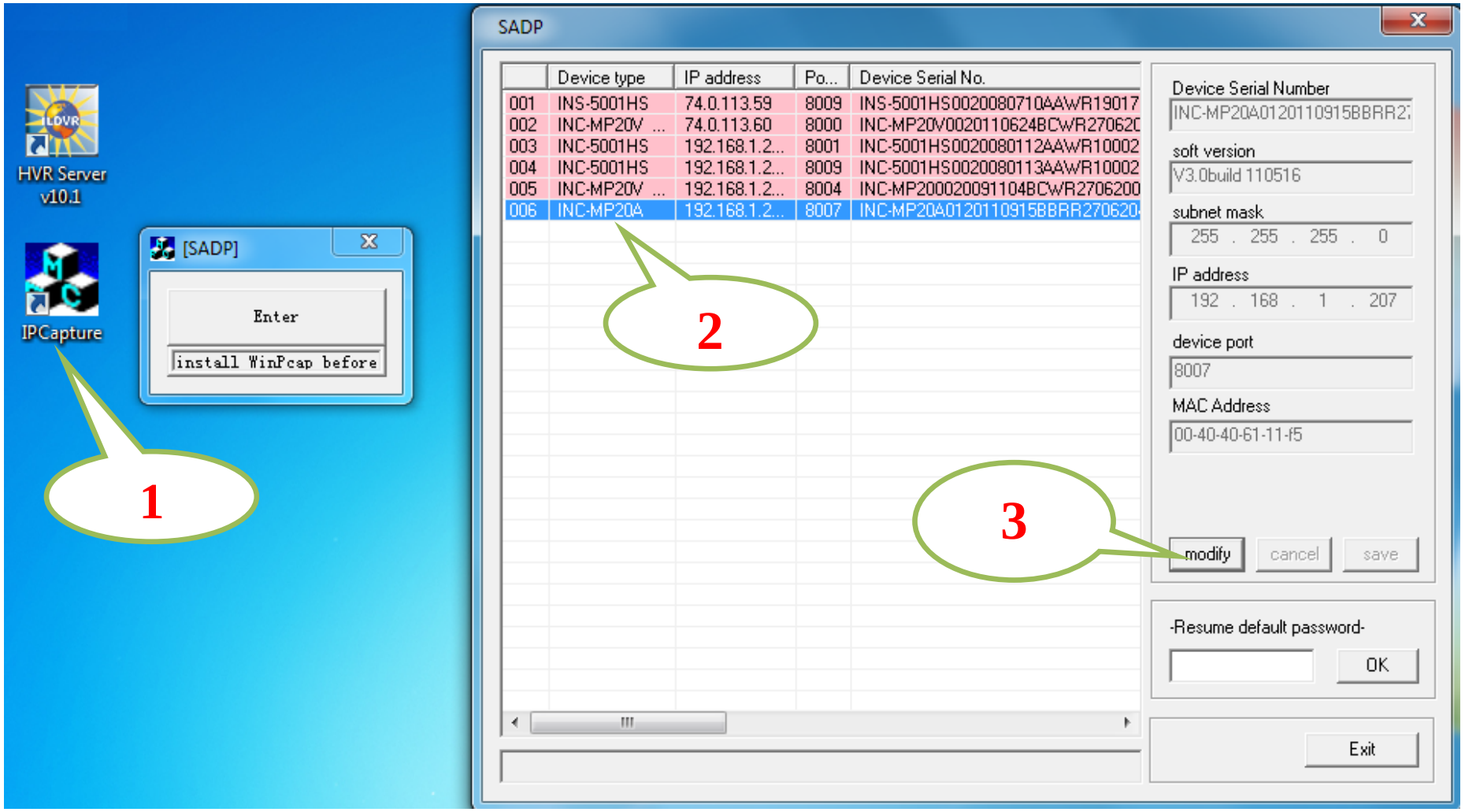




Remote configuration interface, all parameters and settings are exactly the same as local setup, please refer to above sections.

16 Search and Modify IP Address

Before connecting NetDVR to network, please make sure whether the default IP address of the camera fit your local network environment. You can search and modify the IP address locally but we offer a convenient utility “IPCapture” to search and modify the IP address of IP device. IPCapture is an independent utility program. You can find it in the software CD or download it from ILDVR web site. Please connect the IP camera and the PC running IPCapture program in same network segment.



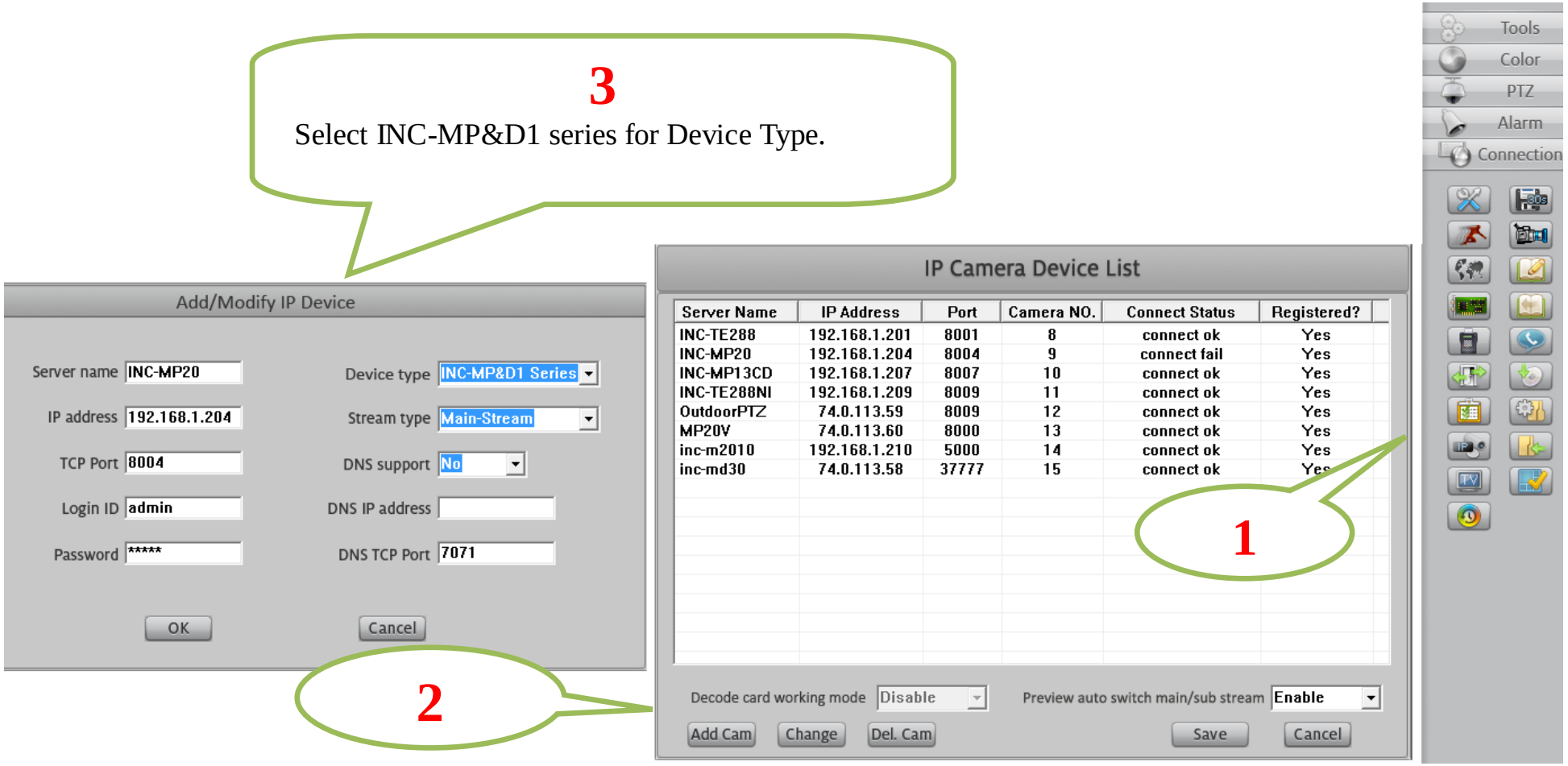
For your attention:
IP capture can be used to find the IP address of multiple products includes NetDVR, IP camera and IP video server, all IP devices listed in IPcapture are grouped in the device type of INC-MP&D1 Series. Refer to next section.

17 Connect to HVR Server and Live Center

In some business surveillance system the record data security is very sensitive and important. Data redundancy is necessary in this kind of surveillance project. But most of DVRs in the market don't offer any data redundancy policy. If the HDD crash, all recording video would be lost. How to build up a cost effective backup system is not only the

customer's concern but also the installer's interest. ILDVR IP-CCTV solution offers multiple software kits to help our customers to build their data backup system. Here takes the HVR system for example.

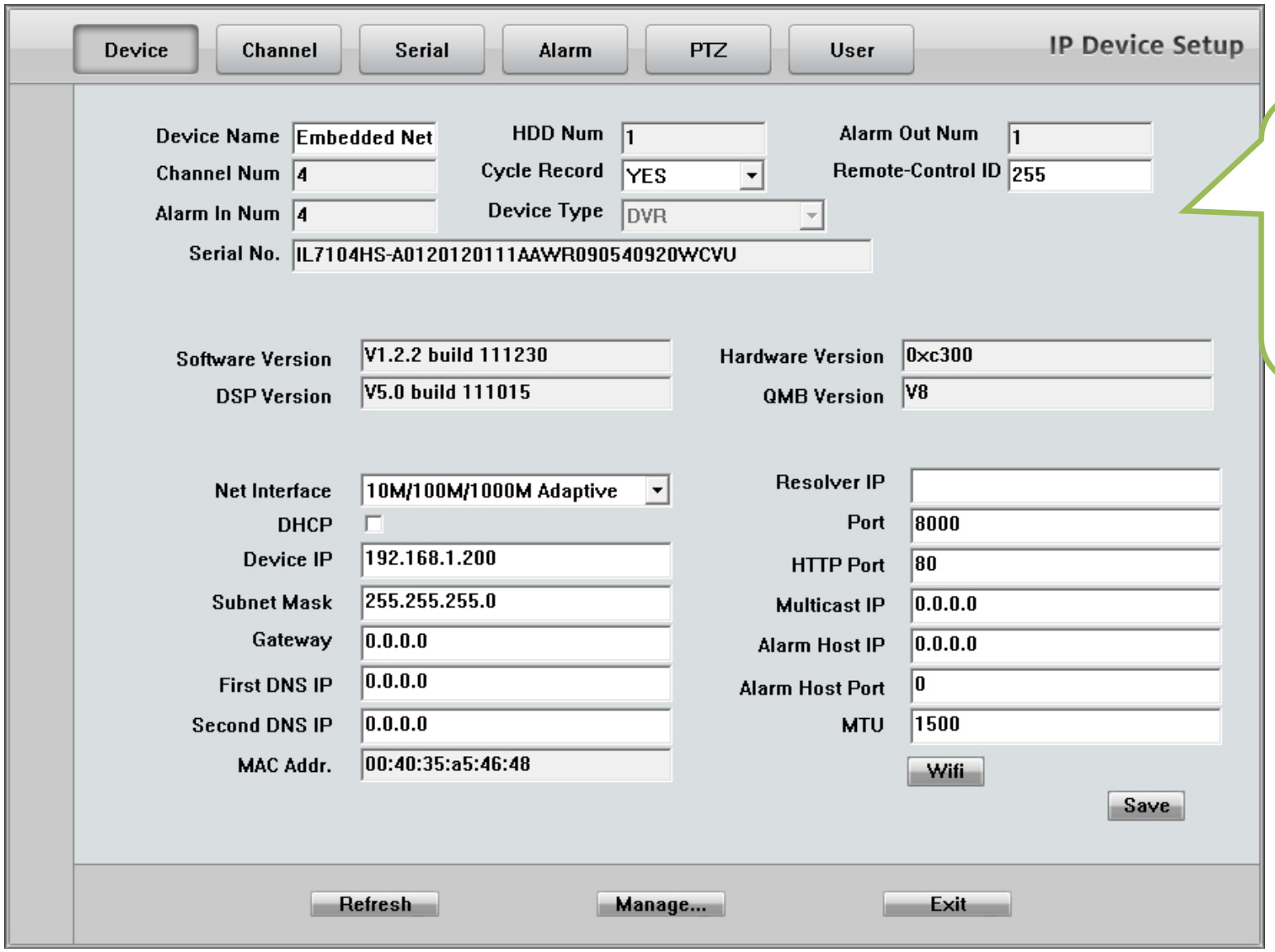
In the main interface of HVR Server, click Tools icon to expand the Tool Panel, click Add/del IP camera button to bring up "IP Camera Device List" interface. In Live Center the operation is similar but the first step is to enter Local Setup interface.


3
Select INC-MP&D1 series for Device Type.
Add/Modify IP Device
Server name INC-MP20
IP address 192.168.1.204
TCP Port 8004
Login ID admin
Password *****
Device type INC-MP&D1 Series
Stream type Main-Stream
DNS support No
DNS IP address
DNS TCP Port 7071
OK
Cancel
2
IP Camera Device List
Server Name | IP Address | Port | Camera NO. | Connect Status | Registered?
INC-TE288 | 192.168.1.201 | 8001 | 8 | connect ok | Yes
INC-MP20 | 192.168.1.204 | 8004 | 9 | connect fail | Yes
INC-MP13CD | 192.168.1.207 | 8007 | 10 | connect ok | Yes
INC-TE288NI | 192.168.1.209 | 8009 | 11 | connect ok | Yes
OutdoorPTZ | 74.0.113.59 | 8009 | 12 | connect ok | Yes
MP20V | 74.0.113.60 | 8000 | 13 | connect ok | Yes
inc-m2010 | 192.168.1.210 | 5000 | 14 | connect ok | Yes
inc-md30 | 74.0.113.58 | 37777 | 15 | connect ok | Yes
1
Decode card working mode Disable
Preview auto switch main/sub stream Enable
Add Cam
Change
Del. Cam
Save
Cancel
Tools
Color
PTZ
Alarm
Connection

For your attention:
All NetDVRs (IP device) must be registered in the software then it could be recorded. If you couldn't record video, please update the license file IPEncypt.dat for HVR Server and Live Center software. You can find the update license file in software CD or download from ILDVR web site

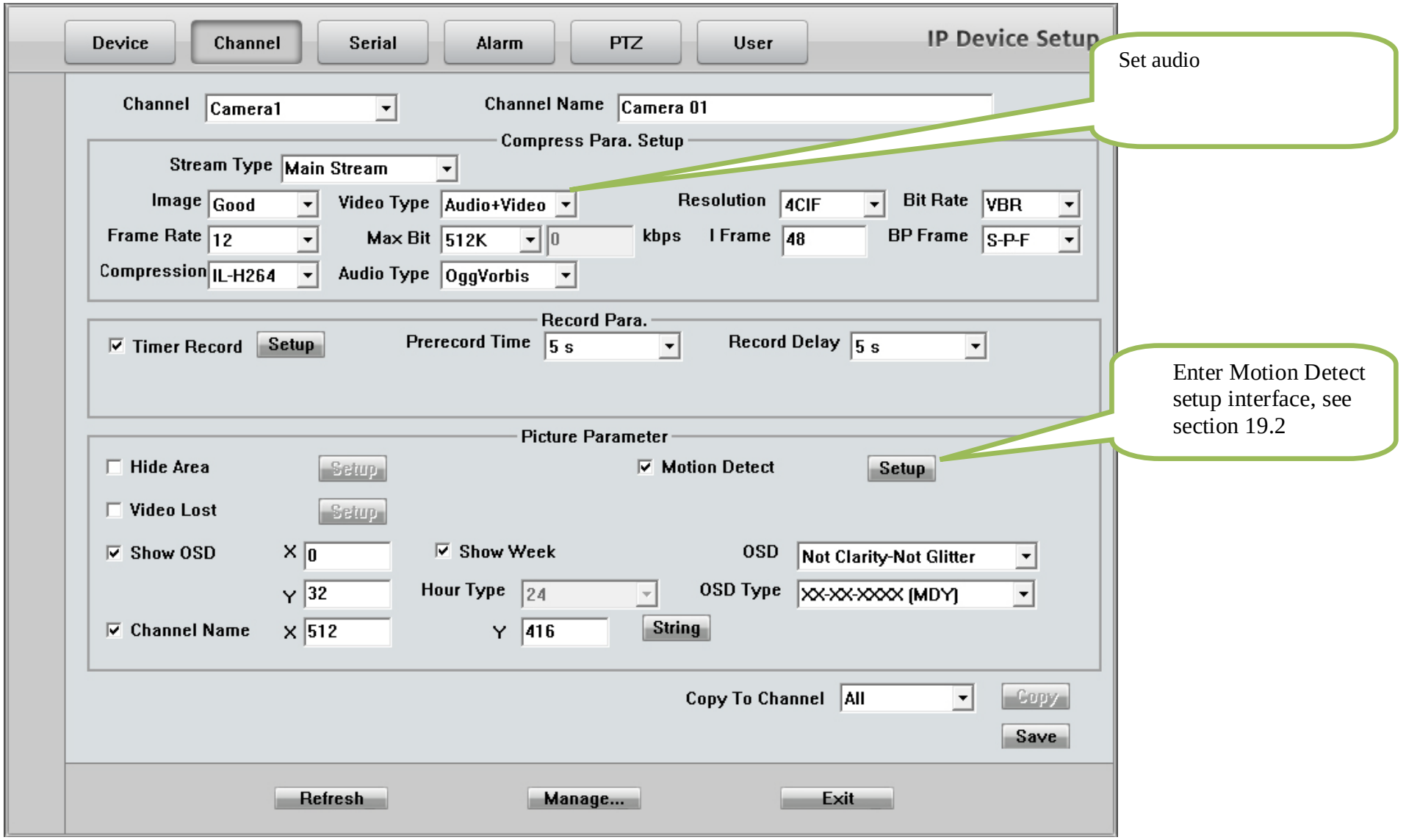
18 Remote Management from HVR Server and Live Center

The following operations need admin user rights to login IP camera. Please refer to above step. Right click IP Camera window to pop up right-click menu. Choose “IPcam_NetDVR Setup” to bring up “IP Camera Setup” interface. In Live Center, entrance is “Remote Setup” then choose Server alias



In “Server” page, you can change IP address, port number and reset the password of admin ID etc. The device serial number is necessary for register license.

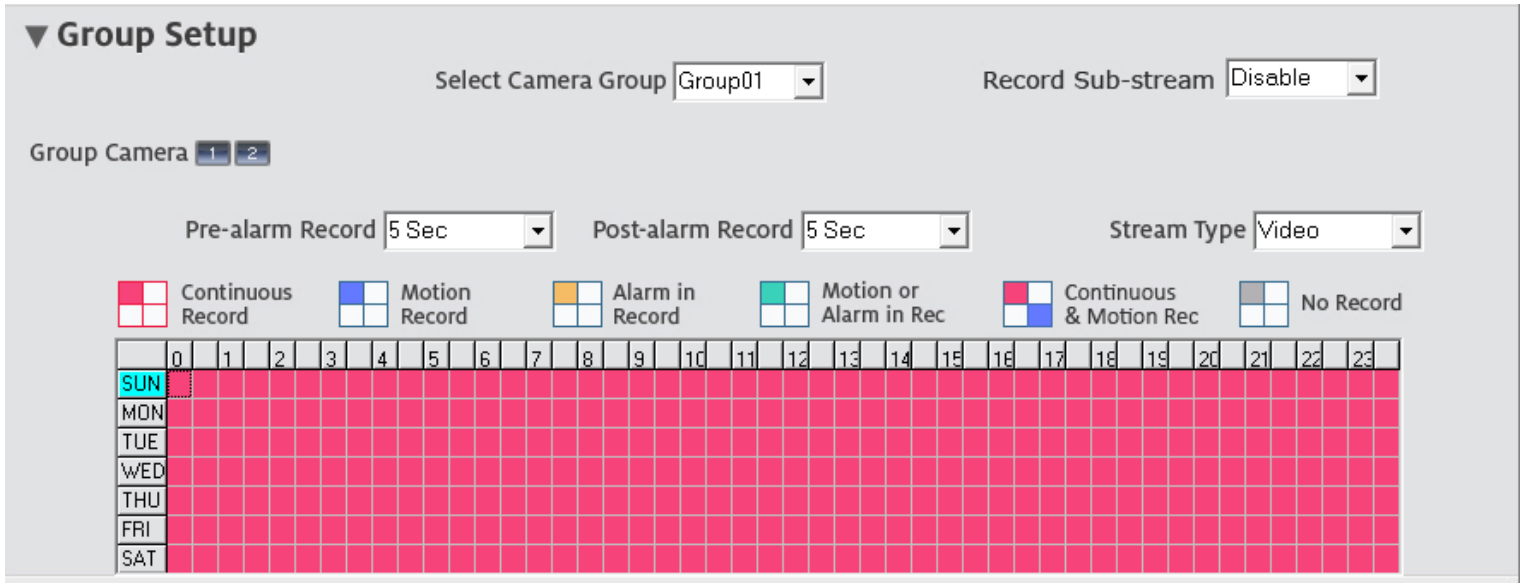
In “Channel” page you can modify video parameters and OSD information, setup motion detect alarm and mask private areas, etc.



19 Network Redundancy Record

19.1 Continuous Record Setup

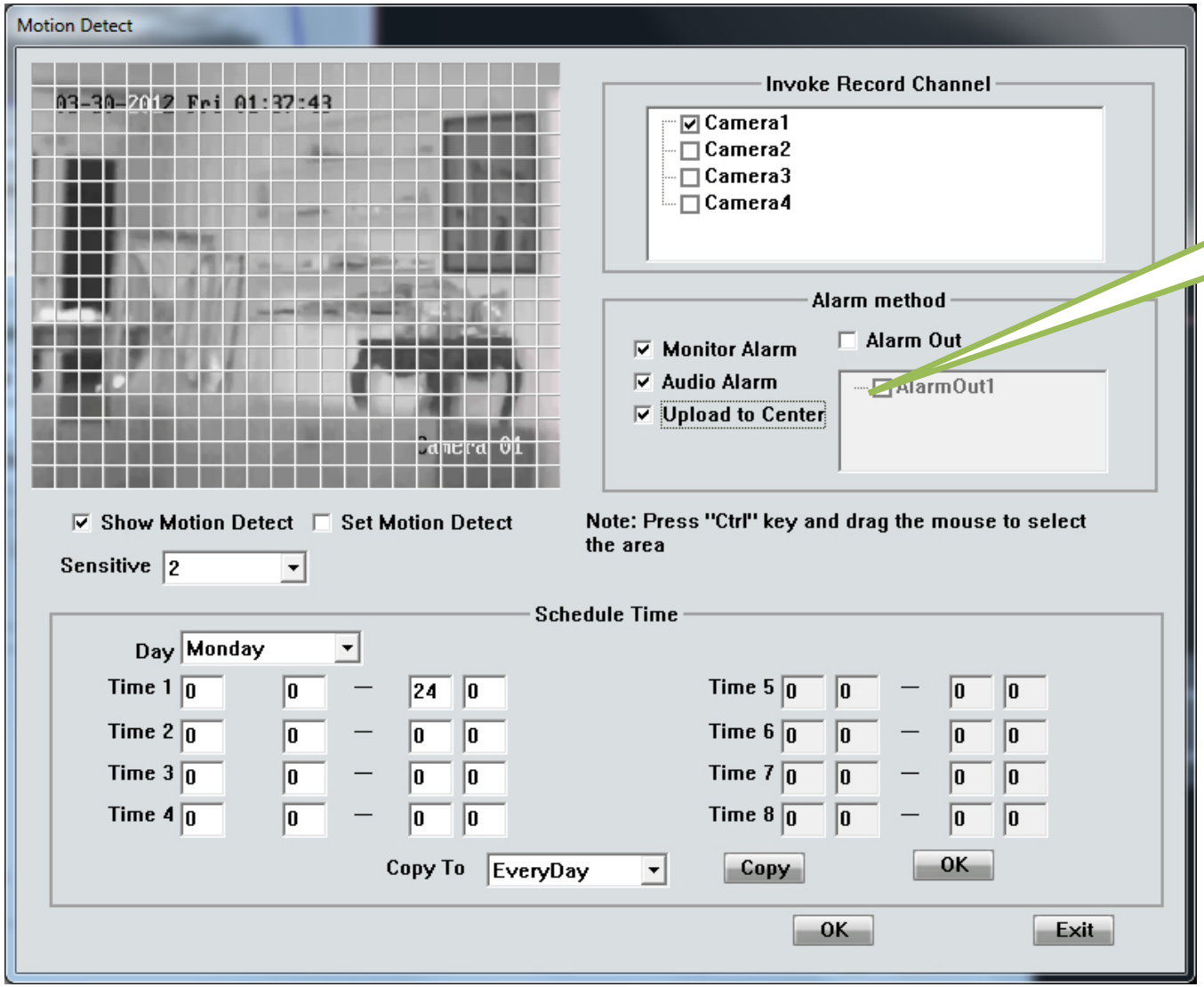
Continuous Record means always record the video, the operation is simple. You get video connection, get video record. You just enter Camera Setup page→ Group Setup, choose camera group and cameras, click the icon “Continuous Record” then slide the mouse to set time table. The operation in Live Center is similar.



19.2 Motion Detect Alarm Record Setup

Motion Detect Record is a little bit complicated than Continuous Record because HVR system need additional signal to analyze the video stream type. So you must configure 2 places. One place is Motion Record setup in HVR system “Camera Setup” page, similar to Continuous Record setup. Another place is Motion page as below,

For your attention, the key item “Upload to center” must be checked on, otherwise your settings only apply to local SD card motion record.

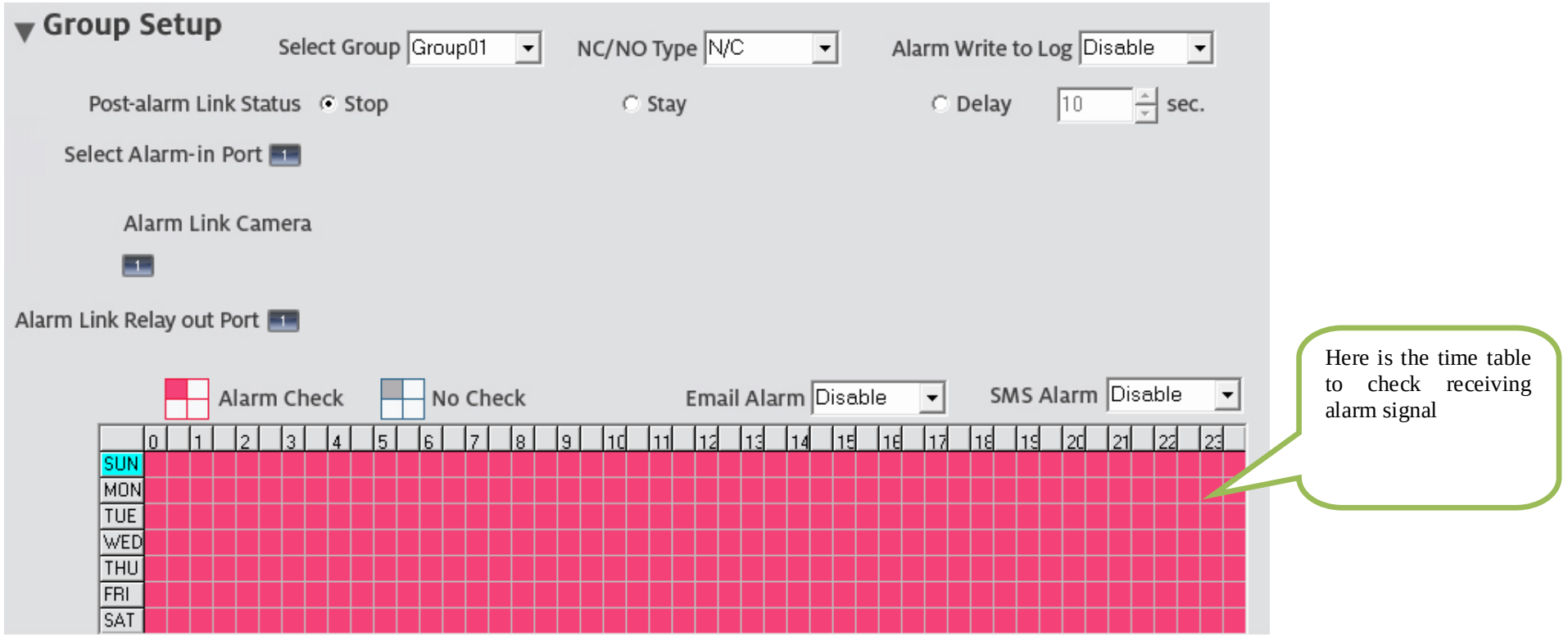


Important:
Upload alarm signal to network

19.3 Sensor Trigger Alarm Record Setup

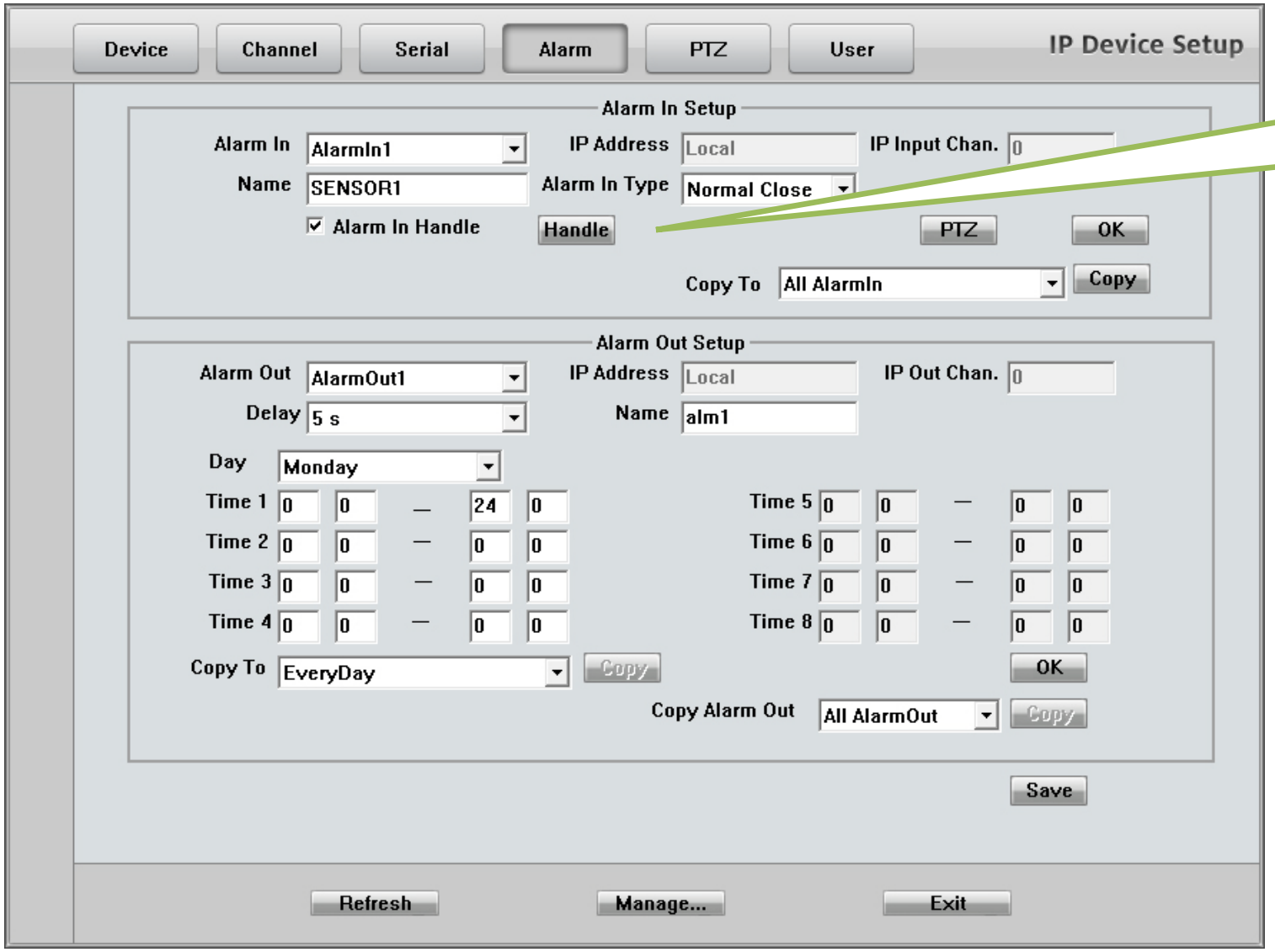
Sensor Record is a kind of external alarm-in trigger record. It is more complicated than Motion Record because motion detect signal is embedded in video stream, but sensor alarm signal is a kind of external signal. You must configure 3 places to execute Sensor Record. The first place is Alarm in Record setup in HVR system “Camera Setup” page, similar to Motion Record setup.

The second place is Alarm Check time table in HVR system “Alarm in & Relay out” page as below picture

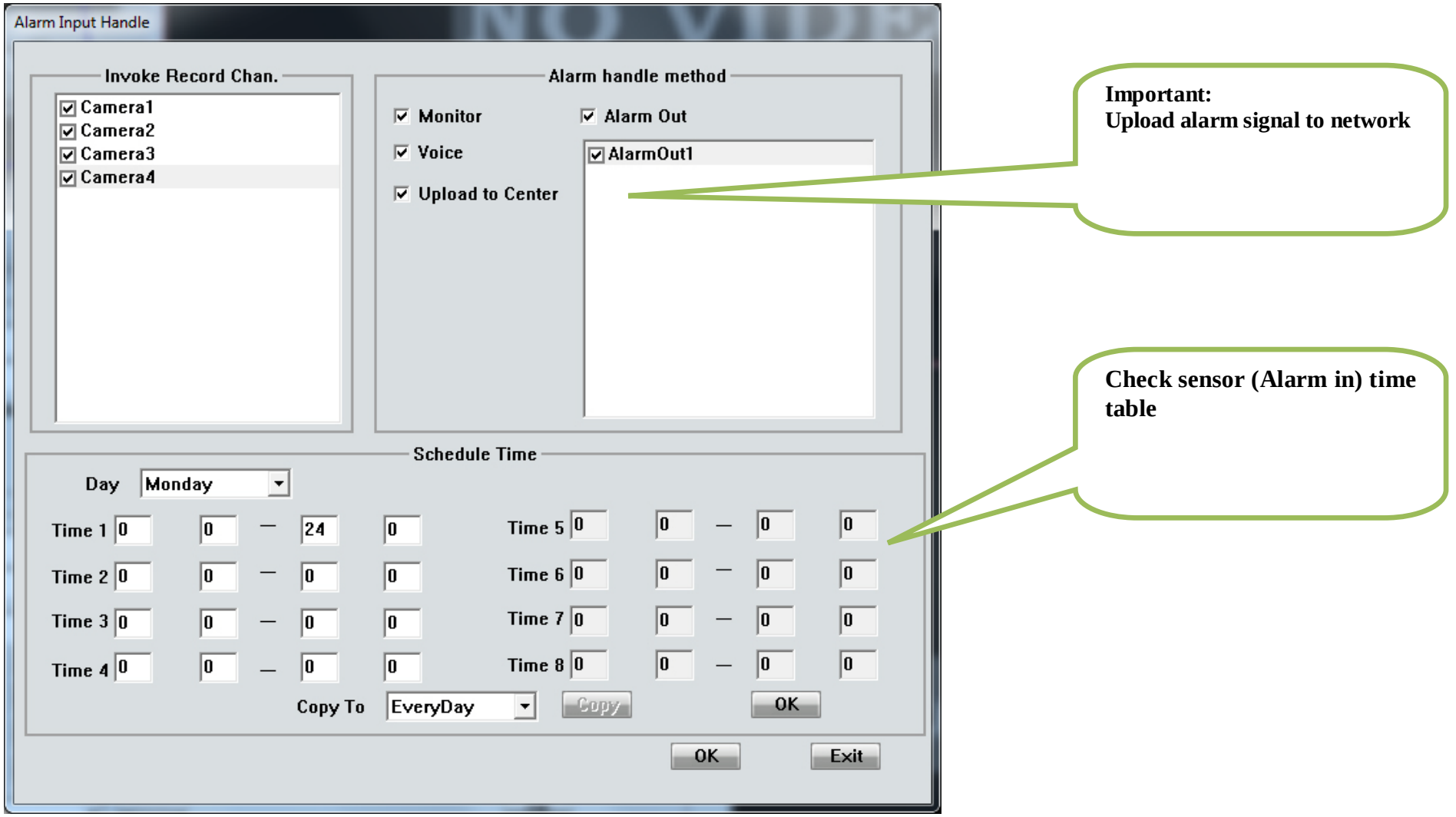


The third place is Sensor page as below.

For your attention, the key item “Upload to center” must be checked on, otherwise your settings only apply to local SD card sensor record.

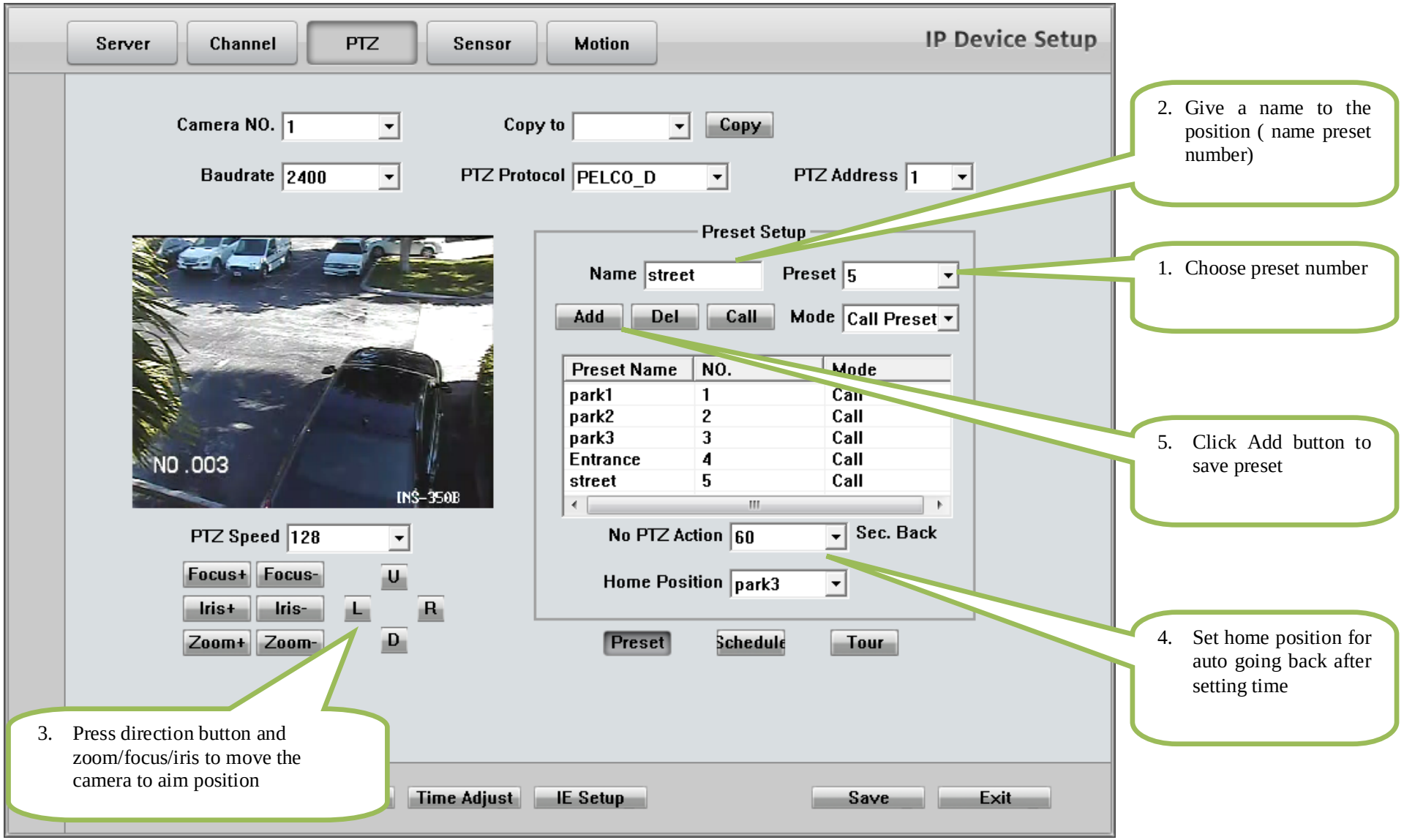


Click Handle button to enter Sensor Alarm setup interface, see next page.



20 Remote PTZ Operation

If you have analog speed dome connect to NetDVR, please setup preset position, auto-spot plan and preset tour in this page. Not like analog PTZ which saves preset in camera system, the IP PTZ saves preset in local computer, so if you use another PC to control same IP PTZ, you should do same setting again in that PC. Comparing analog PTZ and IP PTZ, the setup procedure is very different, but the operations of call preset are exactly same.


Server
Channel
PTZ
Sensor
Motion
IP Device Setup
Camera NO. 1
Copy to
Copy
Baudrate 2400
PTZ Protocol PELCO_D
PTZ Address 1
Preset Setup
Name street
Preset 5
Add
Del
Call
Mode Call Preset
Preset Name
NO.
Mode
park1 1 Call
park2 2 Call
park3 3 Call
Entrance 4 Call
street 5 Call
No PTZ Action 60
Sec. Back
Home Position park3
PTZ Speed 128
Focus+
Focus-
Iris+
Iris-
Zoom+
Zoom-
U
L
R
D
Preset
Schedule
Tour
Time Adjust
IE Setup
Save
Exit
NO .003
INS-350B
2. Give a name to the position (name preset number)
1. Choose preset number
5. Click Add button to save preset
4. Set home position for auto going back after setting time
3. Press direction button and zoom/focus/iris to move the camera to aim position

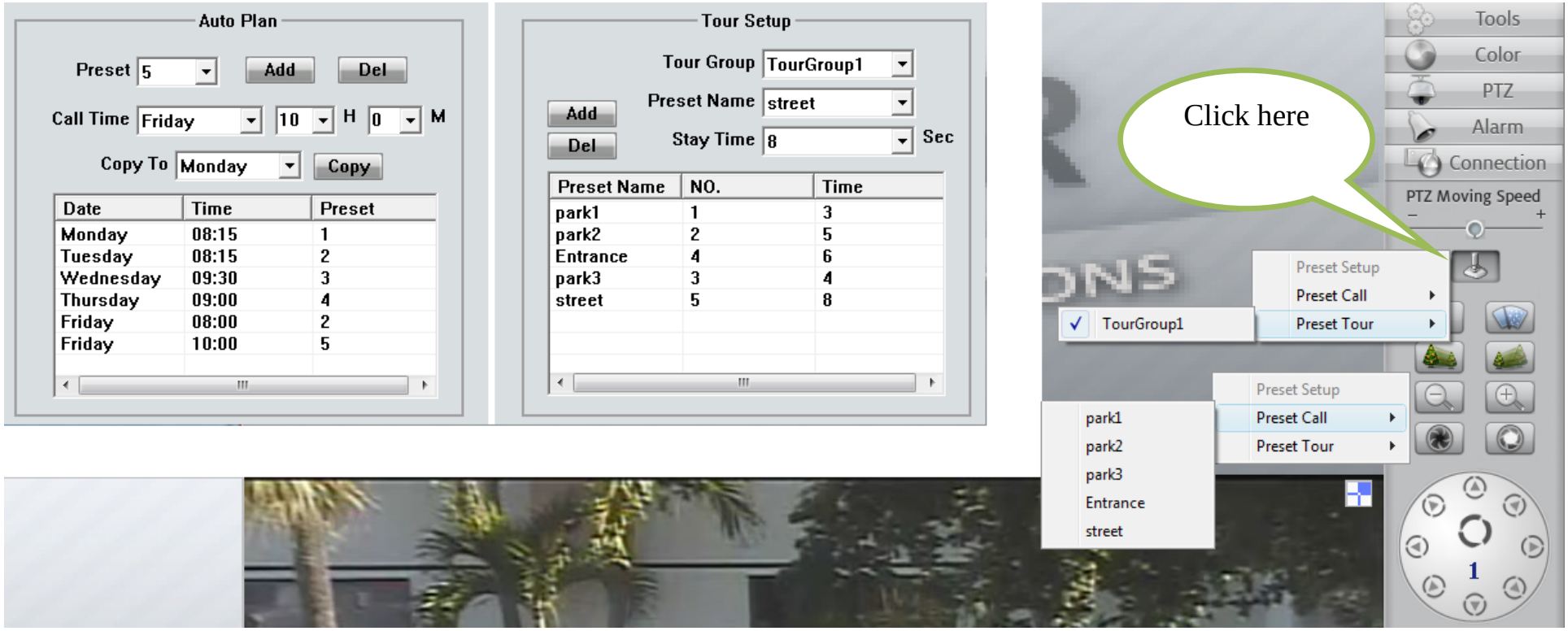
Auto Plan:

Auto Plan means HVR software automatically call the preset position by a scheduled time table. When the system time reach, the IP speed dome will auto move to preset position. You can save up to 64 moments and one preset could be used multiple times.

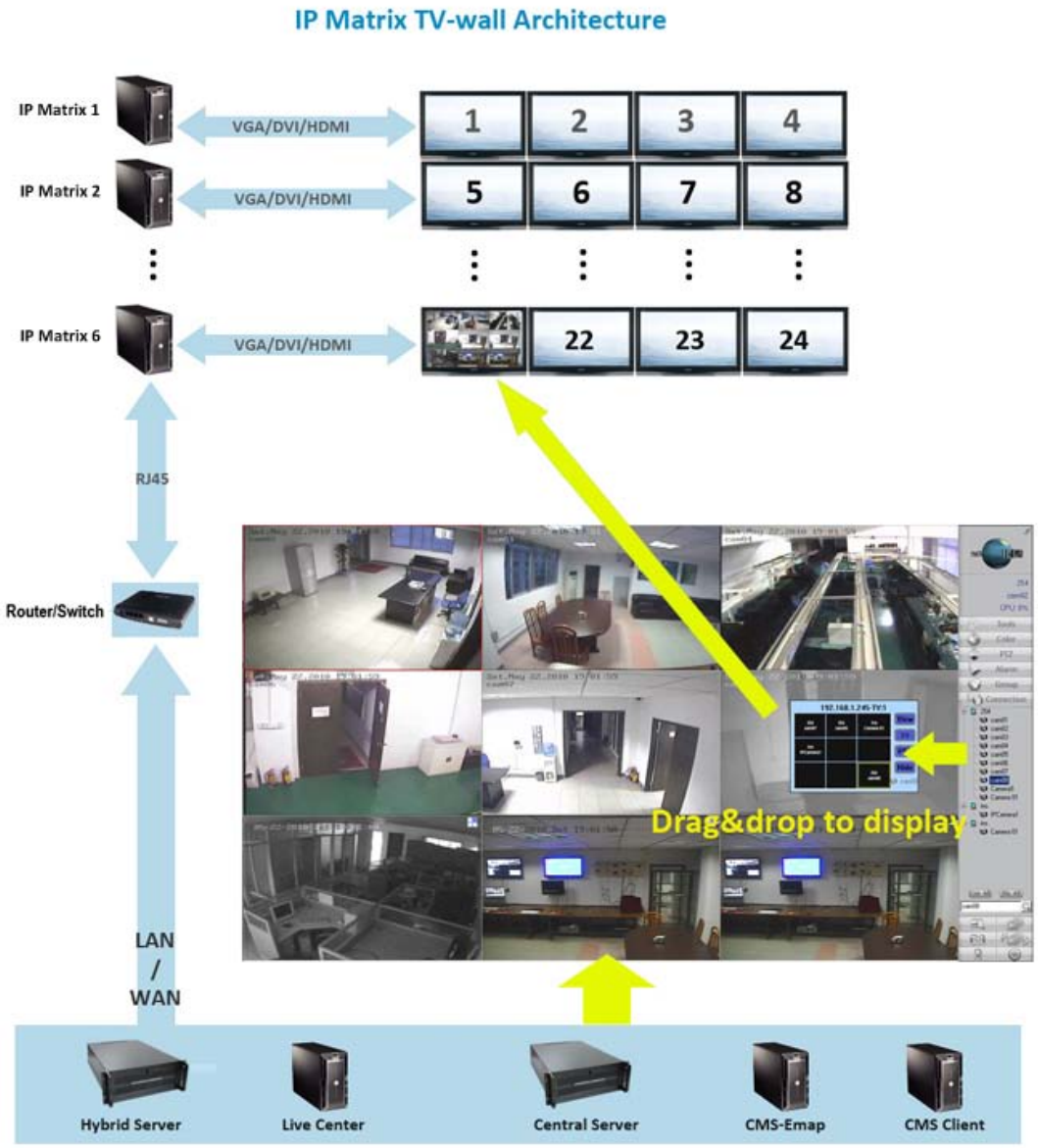
Tour Group:

Tour Group means you can put different preset position in a sequential group, each preset position could be defined a staying time (stay there without moving). When you execute a Tour, the IP camera will continuously move according to the sequence and time table saved in the group. You can save up to 8 groups.

In main interface of HVR Server or Live Center, click “Preset Operation” button to bring up preset menu then choose call preset or tour preset.



21 Display on TV-wall



For large surveillance system the TV-wall is important and necessary. IP camera cannot be integrated into traditional matrix system. ILDVR free software IP Matrix offers innovative TV-wall solution.

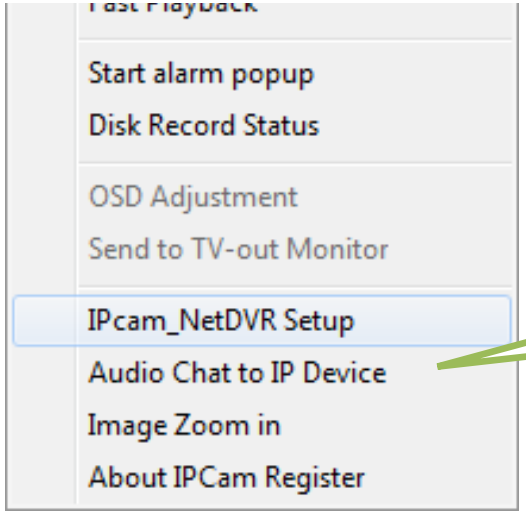
All ILDVR software support IP matrix operation, one computer running HVR Server / Live Center / CMS supports up to 6 IP Matrix TV-client.

One computer running IP Matrix software supports 4 monitor outputs, each monitor can display up to 16 windows (cameras). That means one IP Matrix can display max. 64 cameras simultaneously

In IP matrix, each video window can be put multiple cameras by switch viewing.

22 Audio Chat

From right-click menu choose “Audio Chat to IP Device” to initialize a remote talk between PC to IP camera. This feature needs microphone (audio pickup) and speaker (earphone) to support in both ends. If no audio device can be detected, the “End Talk” dialog will not pop up. That means system will ignore your request.

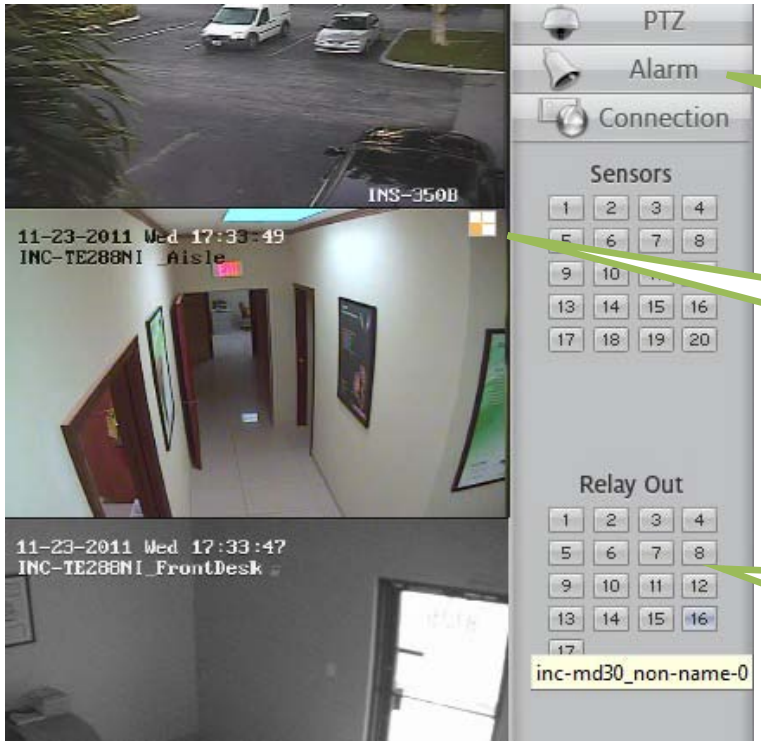


1

2

23 Manually Trigger Alarm out

Manual trigger alarm out (relay out) can be widely used to integrate other electrical device such as open a door, turn of light, etc



1. Open alarm panel

3. Sensor record status

2. Click alarm number key

Appendix: IKB-2888 Keyboard Operation

1. Key Features and Specifications

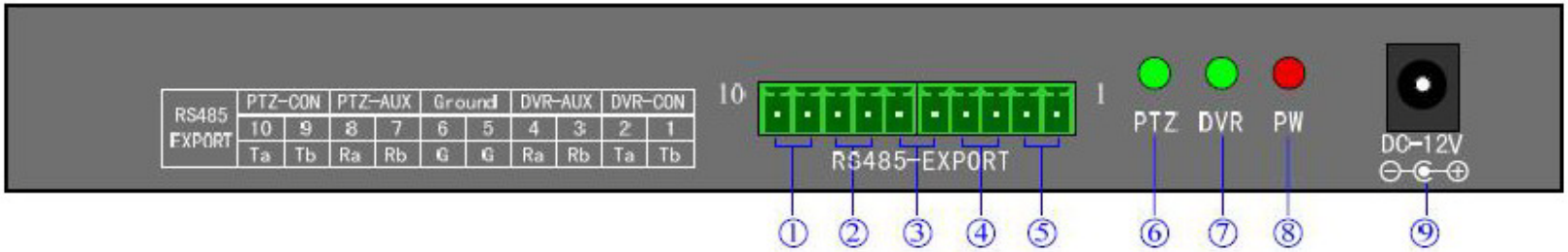
- **Manage NetDVR:** IKB-2888 keyboard works with all models of IL6000HCS/HDS/HN series of NetDVR. It can manage up to 31 NetDVR. It has the full functions of remote controller and front panel.
- **Control Speed Dome through NetDVR or directly:** Support up to 496 Speed Domes through NetDVR (31 DVRs *16ch). Support up to 255 Speed Domes (address are among 0~254) if Speed Dome RS485 port connects to keyboard RS485 port directly.
- **Multiple PTZ Protocols:** Built in multiple PTZ protocols. For specific project that existed protocols cannot fulfill the requirement ILDVR offers software upgrade service without changing any hardware.
- **Cascade Connection:** IKB-2888 keyboard supports one master keyboard and 15 slave keyboard cascade connections. Keyboard IDs range from 0 to 15.

Specifications

Keyboard model	IKB-2888
Support NetDVR number	31
Support PTZ number	255
Control model	RS-485 half-duplex mode Baud rate: 1200 ~ 19200bps
Communication interface	RS485 port
LCD screen	128mm×64mm
Joystick	3D
Max. cable length	1200m
Power supply	DC12V
Working temperature	-10℃-- +55℃
Working humidity	10%--90%
Size	360mm*200mm*108mm
Weight	3.2KG

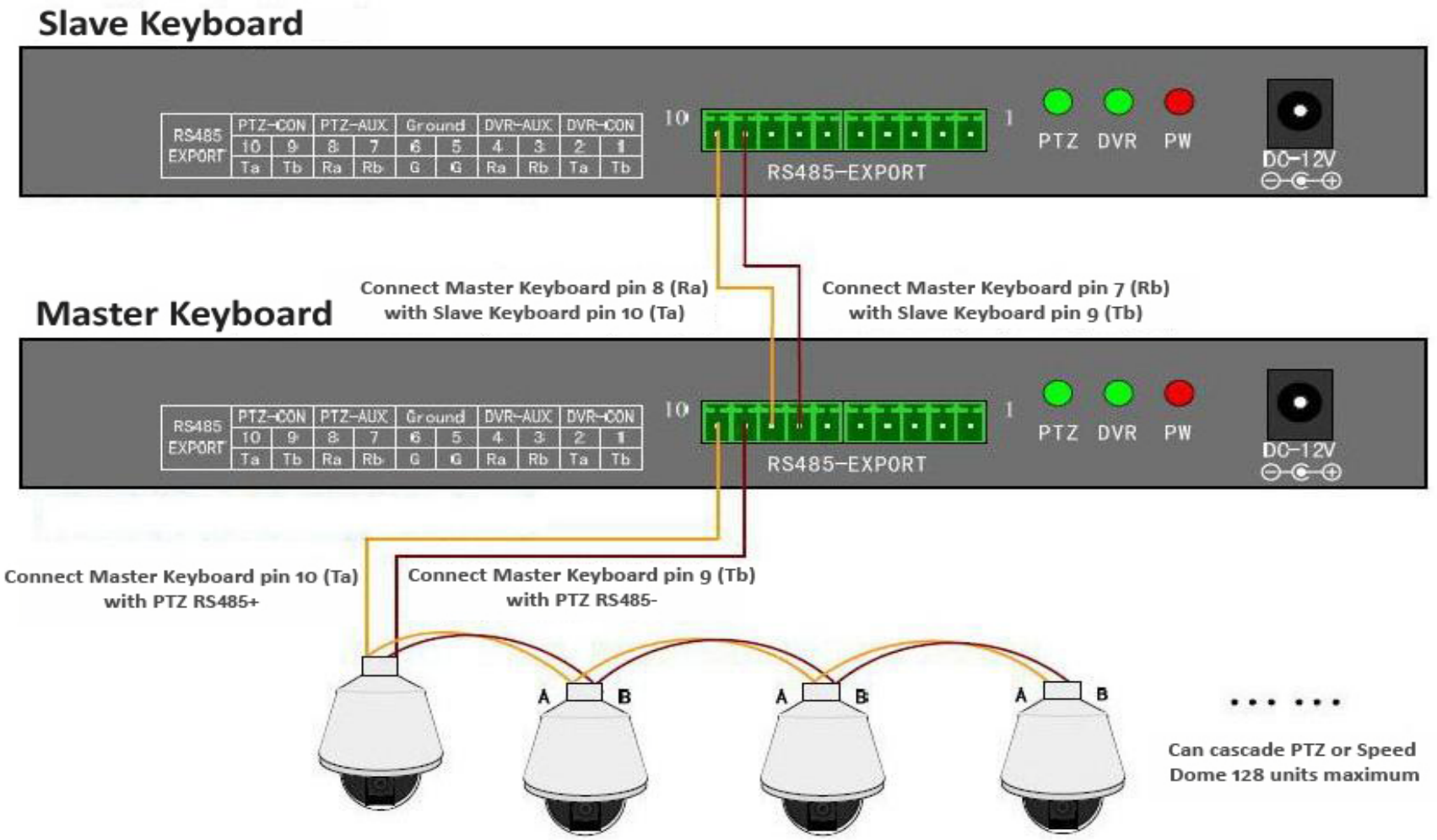
2. Wire Ports

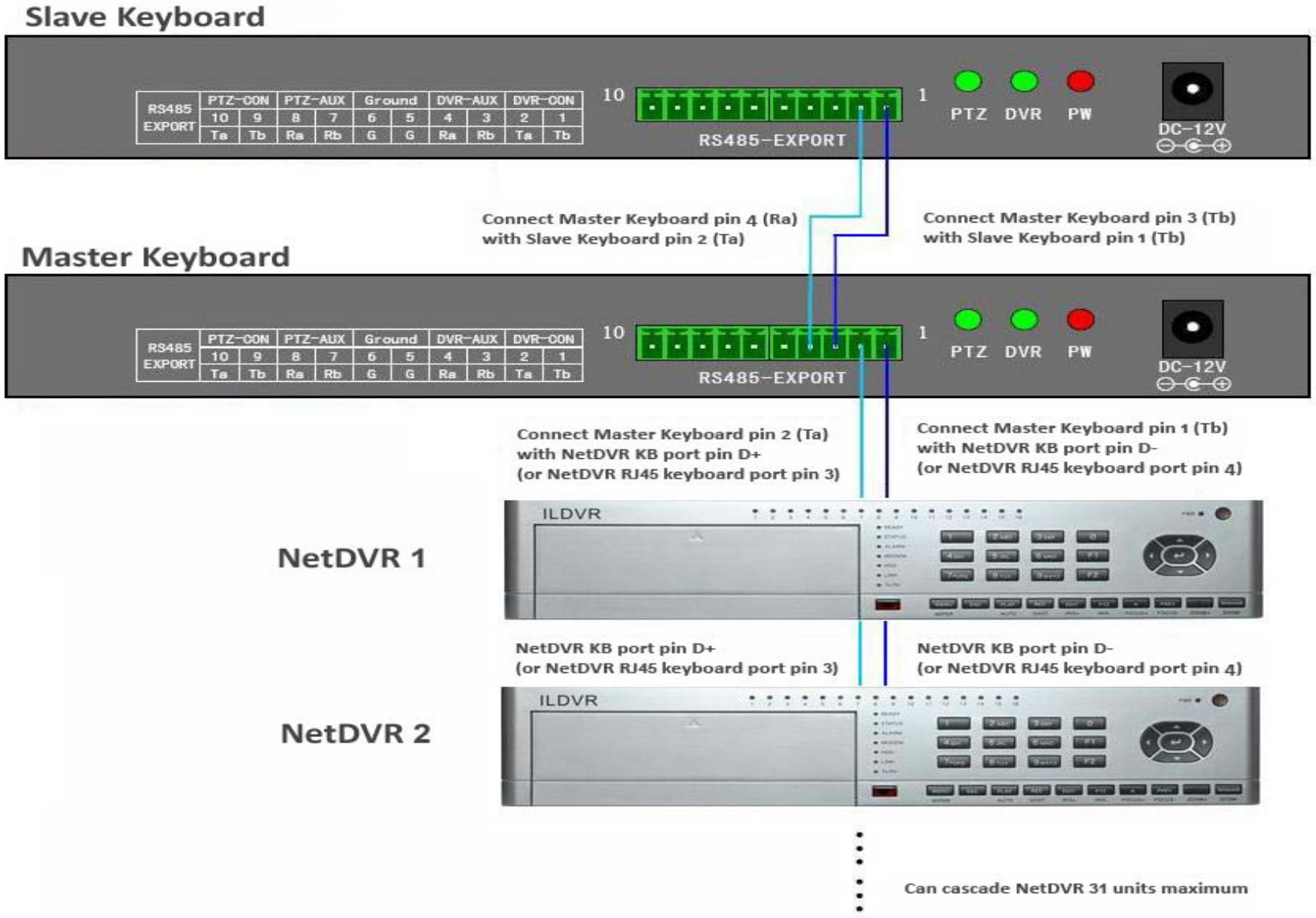
2.1 Back panel interface



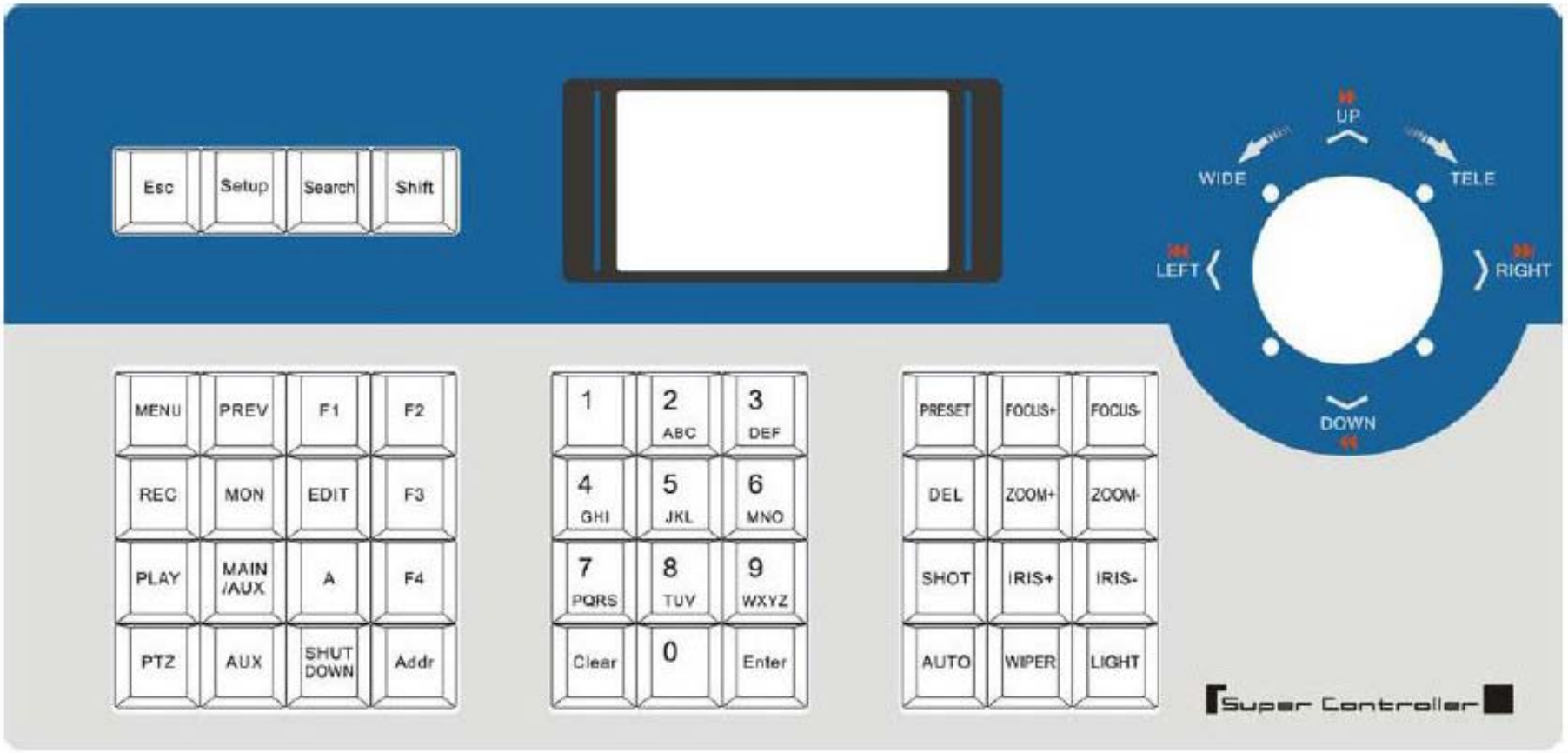
Item	Name	Descriptions
①	**PTZ-CON**	Master keyboard RS485 port. Ta=RS485+, Tb=RS485-. When there is only one keyboard in use, it must be used as master keyboard.
②	**PTZ-AUX**	Slave keyboard connection port. **Ra** (pin8) connects to salve keyboard **Ta** (pin10). **Rb** (pin7) connects to slave keyboard **Tb** (pin9).
③	**Ground**	Ground terminal
④	**DVR-AUX**	Slave keyboard NetDVR connection port. **Ra** (pin4) connects to **Ta** (pin2) of salve keyboard. **Rb** (pin3) connects to **Tb** (pin1) of slave keyboard.
⑤	**DVR-CON**	Master keyboard NetDVR connection port. **Ta** (pin2) connects to **D+** of NetDVR **KB** port. **Tb** (pin1) connects to **D-** of NetDVR **KB** port. When there is only one keyboard in use, it must be used as master keyboard.
⑥	**PTZ**	PTZ work status indicator (Green=on).
⑦	**DVR**	DVR work status indicator (Green=on).
⑧	**PW**	Power indicator (Red=on).
⑨	**DC-12V**	DC **12V** power input

2.2 Typical Wiring Diagram


Slave Keyboard
RS485 EXPORT
PTZ-CON 10 9 Ta Tb
PTZ-AUX 8 7 Ra Rb
Ground 6 5 G G
DVR-AUX 4 3 Ra Rb
DVR-CON 2 1 Ta Tb
10
1
RS485-EXPORT
PTZ
DVR
PW
DC-12V
Connect Master Keyboard pin 8 (Ra) with Slave Keyboard pin 10 (Ta)
Connect Master Keyboard pin 7 (Rb) with Slave Keyboard pin 9 (Tb)
Master Keyboard
Connect Master Keyboard pin 10 (Ta) with PTZ RS485+
Connect Master Keyboard pin 9 (Tb) with PTZ RS485-
A
B
Can cascade PTZ or Speed Dome 128 units maximum


Slave Keyboard
RS485 EXPORT
PTZ-CON 10 Ta 9 Tb
PTZ-AUX 8 Ra 7 Rb
Ground 6 G 5 G
DVR-AUX 4 Ra 3 Rb
DVR-CON 2 Ta 1 Tb
10
1
RS485-EXPORT
PTZ
DVR
PW
DC-12V
Connect Master Keyboard pin 4 (Ra) with Slave Keyboard pin 2 (Ta)
Connect Master Keyboard pin 3 (Tb) with Slave Keyboard pin 1 (Tb)
Master Keyboard
Connect Master Keyboard pin 2 (Ta) with NetDVR KB port pin D+ (or NetDVR RJ45 keyboard port pin 3)
Connect Master Keyboard pin 1 (Tb) with NetDVR KB port pin D- (or NetDVR RJ45 keyboard port pin 4)
NetDVR 1
ILDVR
NetDVR KB port pin D+ (or NetDVR RJ45 keyboard port pin 3)
NetDVR KB port pin D- (or NetDVR RJ45 keyboard port pin 4)
NetDVR 2
Can cascade NetDVR 31 units maximum

2.3 Front panel description



LCD screen

All operation steps will be displayed on the LCD screen. The screen will automatically turn to screen save mode in 30 seconds without any input.

Definitions of keys

Name of key	Description of operation function
ESC	Back to up-level menu
Setup	Hold on 3 seconds to enter keyboard configuration status (default password: 8888)
Search	To view the keyboard system info such as device serial number, model name and PTZ protocol
Shift	Switch the CONTROL mode between NetDVR and speed dome
MENU	Show the main menu
PREV	Switch the split viewing mode of 1x, 4x, 9x, and 16x
F1, F2, F3, F4	Speed dome function key. Refer to LCD screen indication depending on the PTZ protocol to operate
REC	Shift to NetDVR manually record mode.
MON	Special control key the four auxiliary outputs of NetDVR (hold on 2 seconds)
EDIT	Edit/change the inputs.
PLAY	Enter NetDVR playback status.
MAIN/AUX	Switch the main/aux output port (hold on 2 seconds)
A	Switch input method
PTZ	Enter NetDVR PTZ control status.
AUX	Reserved in NetDVR control mode
Shut Down	Power off NetDVR
Addr	Change the NetDVR device ID or PTZ address to operate
Clear	Clean the current input
ENTER	Confirm the current input
0-9	Numeric key of 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
A-Z	Letter key of A-Z (26 letters)
PRESET	Setup the speed dome preset
DEL	Delete the speed dome preset
SHOT	Call the speed dome preset
Auto	Run the speed dome tour（depending on the connected speed dome, please refer to the speed dome operation guide）

FOCUS+	Set the lens focus near
FOCUS-	Set the lens focus far
ZOOM+	Zoom in the lens
ZOOM-	Zoom out the lens
IRIS+	Open the lens iris
IRIS-	Close the lens iris
WIPER	PTZ wiper on/off
Light	PTZ light on/off

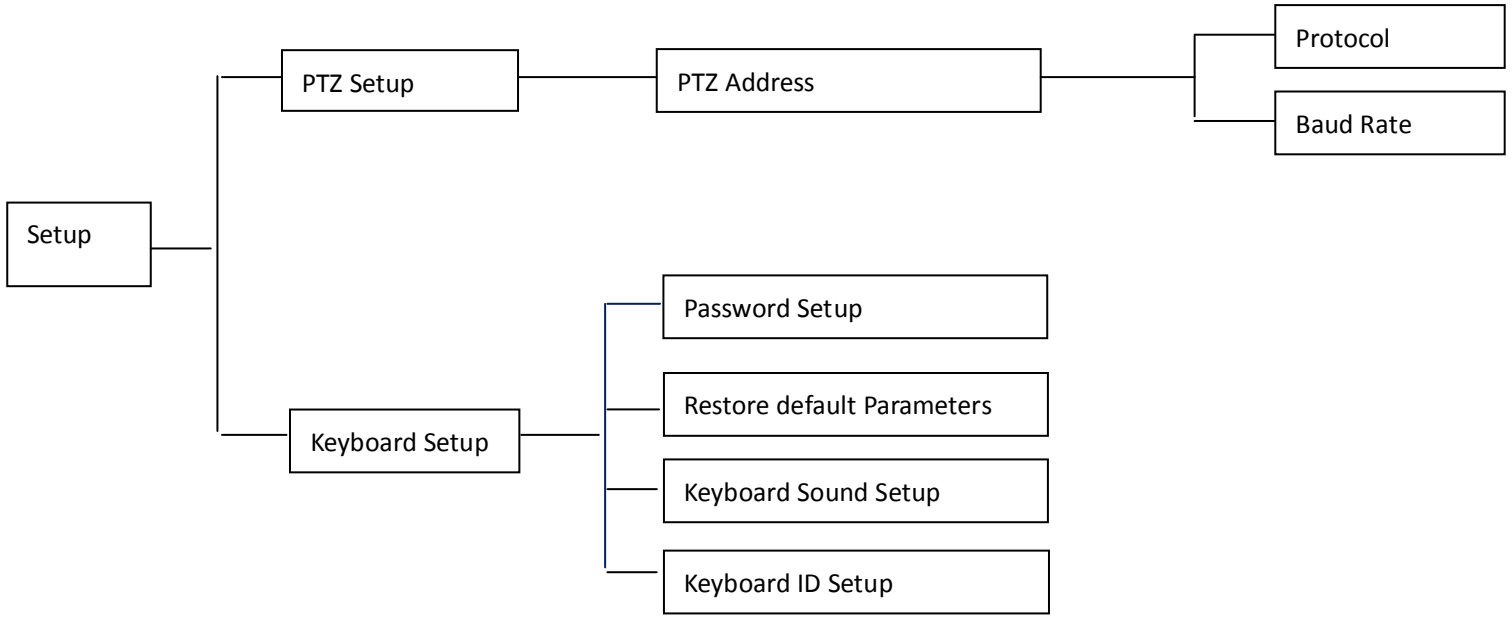
Joystick movements

Figure	Operation	Descriptions
	up	In PTZ control mode: control the movement of pan/tilt In DVR control mode: play fast when playback the record file
	down	In PTZ control mode: control the pan/tilt to move upon In DVR control mode: play slowly when playback the record file
	left	In PTZ control mode: control pan/tilt to move left In DVR control mode: move backward when playback the record file
	right	In PTZ control mode: control pan/tilt to move right In DVR control mode: move forward when playback the record file
	rotate left	Zoom in the lens
	rotate right	Zoom out the lens

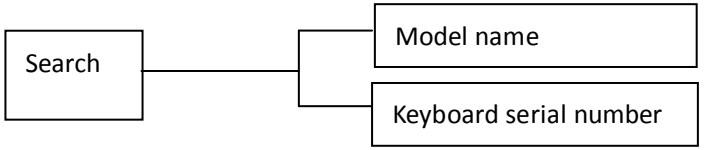
3. Keyboard Configuration

3.1 Keyboard menu structure tree

Configuration menu structure: Press SETUP key and hold on 3 seconds to enter setup interface, default password is “8888”



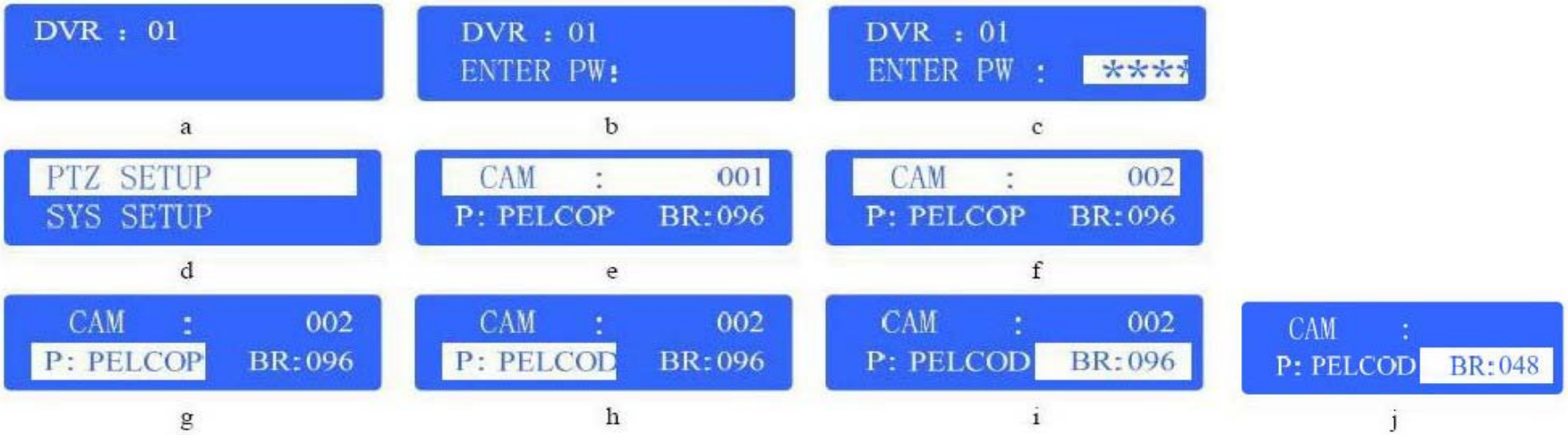
Keyboard system info menu structure: Press SERACH key to display the keyboard system info.



3.2 Configuration illustration

Here is an example to illustrate how to setup speed dome, change the PTZ protocol of speed dome 002 to PELCO-D, then change the baud rate to 2400.

- In the mode of standby (icon a), press and hold on the “Setup” key for 3 seconds, login the main menu (icon b).
- Input the password (icon c, default password: 8888).
- Press [Enter] into setup menu, move the joystick up / down to choose [PTZ SETUP] / [SYS SETUP] (icon d).
- Choose [PTZ SETUP] and press [Enter] into [PTZ SETUP].
- Move the Joystick left and right to select the address (ID) of speed dome, e.g. 002 (icon e, f), then press [Enter] into next level menu (icon g).
- Move the joystick up / down to select PTZ protocol, e.g. PELCO-D (icon h).
- Move the joystick right to change the baud rate (icon i), and then select the correct baud rate (icon j).
- Press [Enter], then press “ESC” back to the standby mode (icon a).
- Configuration is done



4. Control Speed Dome through NetDVR

In this application the Speed Dome RS485 port connects to NetDVR RS485 port. Multiple speed domes may have same address (ID) if their RS485 ports connect to different NetDVR separately. Operation steps are:

Step 1: Set every NetDVR device ID an exclusive number such as 01, 02, 03, and so on.

Step 2: Set every speed dome address (ID) an exclusive number such as 01, 02, 03, and so on. These speed domes are all connected to one NetDVR.

Step 3: Press “Shift’ key to enter NetDVR working mode

Step 4: Press “Addr” key then input NetDVR device ID to select a target NetDVR device.

Step 5: Press “Enter” key to confirm your selection.

Step 6: Press “PTZ” key then input a target speed dome ID number that you want to control.

Step 7: Begin PTZ control

Step 8: To change other speed dome just input the ID number then begin PTZ control.

5. Control Speed Dome directly

In this application the Speed Dome RS485 port connects to keyboard RS485 port directly. Every speed dome must has an exclusive address (ID), address are among 0~254. Operation steps are:

Step 1: Set every speed dome address (ID) an exclusive number such as 01, 02, 03, and so on.

Step 2: Press “PTZ” key then input a target speed dome ID number that you want to control.

Step 3: Begin PTZ control.

Step 4: To change other speed dome just input the ID number then begin PTZ control.

<End>

Technical Support Information

Please fill in this form in order to get prompt technical service in case of emergency!

Item	Description
NetDVR Model Name	
NetDVR serial number	
Firmware Version	
Purchasing date	
Dealer’s Contact info	**Company name:** **Technical Engineer:** **Tel:** **Fax:** **Email:**